REPORT RESUMES

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EDUCATIONAL SPECIFICATIONS FOR SECONDARY SCHOOLS.

BY- FLANIGAN, VIRGINIA AND OTHERS

ALACHUA COUNTY BOARD OF PUBLIC INSTRUCTION, FLA.

PUB DATE OCT 66

EDRS PRICE MF-$0.75 HC-$7.80 193P.

DESCRIPTORS- *EDUCATIONAL SPECIFICATIONS, *EQUIPMENT, *FACILITY GUIDELINES, *INSTRUCTIONAL PROGRAMS, *PHYSICAL DESIGN NEEDS, CLASSROOMS, PHYSICAL ENVIRONMENT, SCHOOL PLANNING, SPACE UTILIZATION,

THE REPORT CAN BE USED AS A GUIDE IN THE PREPARATION OF EDUCATIONAL SPECIFICATIONS FOR SECONDARY SCHOOLS. NEW CURRICULA, METHODS OF INSTRUCTION, AND TEACHING AIDS ADD TO THE SOPHISTICATION OF EDUCATION. PROGRAMS ENCOMPASS MANY AREAS OF EDUCATION, EACH REQUIRING PROFESSIONAL DECISIONS. THESE DECISIONS MUST BE ORGANIZED INTO WRITTEN SPECIFICATIONS AS A MEANS OF COMMUNICATING SUCH DECISIONS TO THE ARCHITECT. METHOD OF OPERATION TO THE ULTIMATE CLASSROOM TEACHER AND SCHOOL ADMINISTRATOR IS GIVEN. THE MATERIAL IN THIS GUIDE IS THE RESULT OF A TEAM EFFORT OF COMMITTEES WHOSE PURPOSE IT WAS TO DETERMINE MINIMUM FACILITIES TO CARRY OUT AN EFFECTIVE INSTRUCTIONAL PROGRAM. THE CONTENTS INCLUDE--(1) INTRODUCTION, (2) PHYSICAL SECURITY AND OUR SCHOOLS, (3) MINIMUM SPACE REQUIREMENTS, (4) EDUCATIONAL SPECIFICATIONS, AND (5) AN APPENDIX. THE PROPOSED EDUCATIONAL SPECIFICATIONS DEAL WITH THE FOLLOWING AREAS--(1) ADMINISTRATIVE SUITE AND GUIDANCE, (2) ART, (3) AUDITORIUM, (4) BUSINESS EDUCATION, (5) CUSTODIAL STORAGE SPACE AND FACILITIES AND TOILET FACILITIES, (6) DRIVER EDUCATION, (7) ENGLISH, (8) EXCEPTIONAL CHILD PROGRAM, (9) FOREIGN LANGUAGES, (10) HOME ECONOMICS DEPARTMENT, (11) LARGE GROUP INSTRUCTION ROOM, (12) LIBRARY (MATERIALS CENTER), (13) MATHEMATICS, (14) MUSIC, (15) PHYSICAL EDUCATION, (16) READING, (17) SCHOOL FOOD SERVICE, (18) SCIENCE, (19) SITE PLANNING, (20) SOCIAL STUDIES, (21) SPEECH AND DRAMA, (22) SPEECH THERAPISTS, (23) VOCATIONAL AGRICULTURE, AND (24) VOCATIONAL SHOPS. PLANS AND DIAGRAMS ACCOMPANY THE TEXT. (RK)

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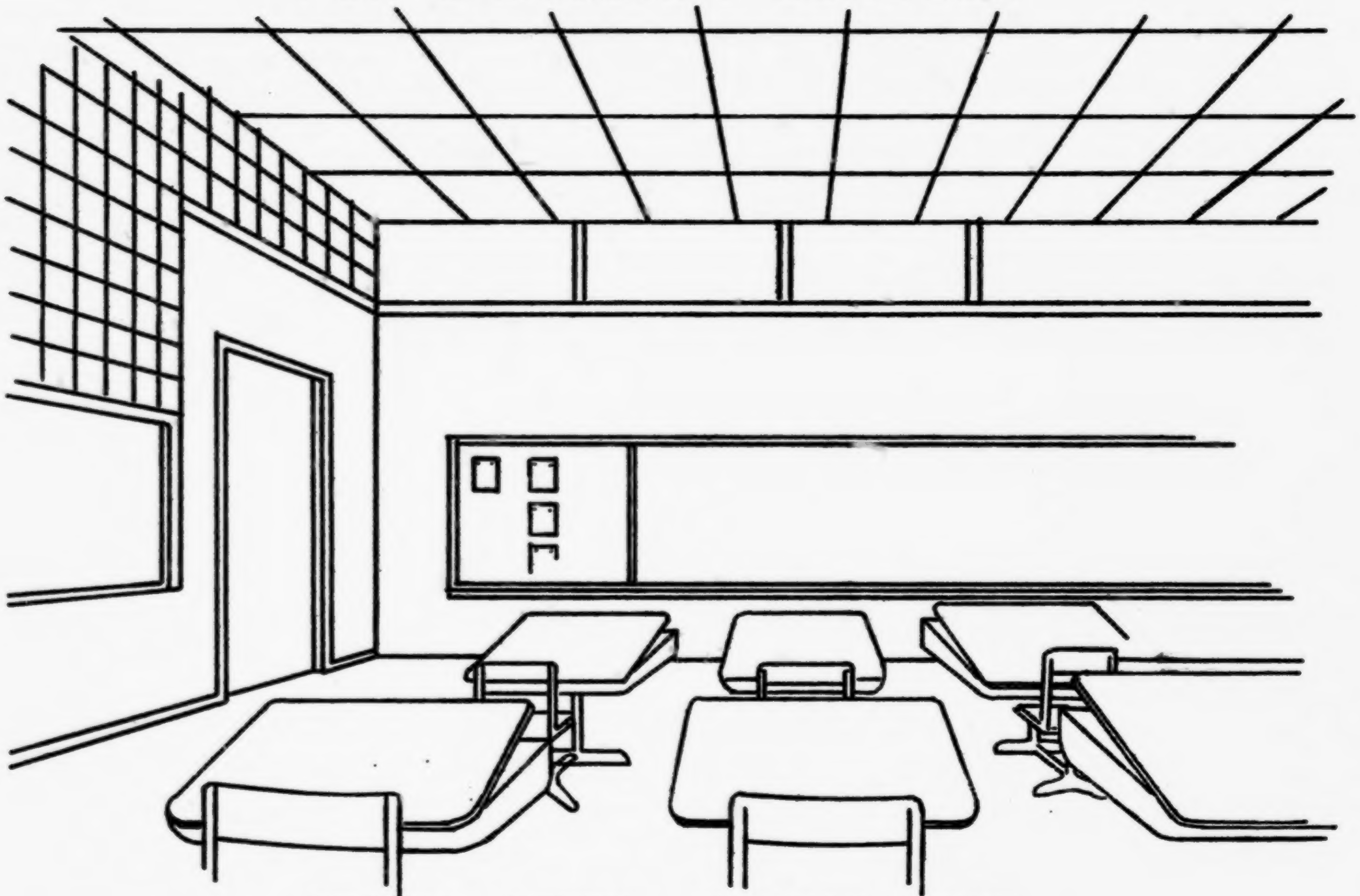
EDUCATIONAL SPECIFICATIONS

FOR SECONDARY SCHOOLS



GRADES SEVEN THROUGH NINE
GRADES TEN THROUGH TWELVE

PREPARED FOR

ALACHUA COUNTY PUBLIC SCHOOLS

W. S. (TINY) TALBOT
SUPERINTENDENT OF PUBLIC INSTRUCTION

EF 001 059

EDUCATIONAL SPECIFICATIONS

SECONDARY SCHOOLS

ALACHUA COUNTY

BOARD OF PUBLIC INSTRUCTION

Alachua County, Florida

October, 1966

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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FOREWORD

The people of Florida -- educators, parents, architects, state and county officials, have an interest in quality education and its future aims in the state. They are not only interested in education, but are sensitive to its needs, both in money and quality of program offered. The parent's interest is that his child obtain an education comparable to any available in the United States. Well planned facilities are necessary to accomplish quality education and to prepare for future changes and growth.

In Alachua County, Florida, school enrollment surpasses all survey predictions. In order to provide necessary facilities and house our pupils adequately, good planning is necessary and must be a continuing process to provide quality education for the growth in all areas.

New curricula, methods of instruction, and teaching aids are adding to the sophistication of education. It is no longer advisable to trust complicated educational planning to informal discussion between the educator and the architect. The programs encompass many areas of education, each requiring professional decisions. These decisions, being a result of the action of many people, lay and professional, must be organized into written specifications as a means of communicating such decisions to the architect. This document further communicates the method of operation to the ultimate classroom teacher and school administrator.

It is the sincere hope of the many committees and staff that the material contained herein will prove invaluable as a guide in the preparation of educational specifications. Their belief is that good planning results in good school plants, which in turn will house the most effective instructional programs and provide the best education possible for the pupils of Alachua County.

ACKNOWLEDGMENTS

The material in this guide is the result of a team effort on the part of staff members of the Alachua County Board of Public Instruction, classroom teachers, principals, secretaries, custodial personnel, students, and interested lay and professional people from all parts of Alachua County.

The material was compiled by Mrs. Virginia Flanigan, Supervisor of Secondary Education, Alachua County, with the constant assistance of the working committees mentioned above, and listed throughout this booklet. Assistance by Mr. Charles J. Benda, Architect, Planning Consultant, Florida State Board of Education, and Mr. Harry Pelley, Educational Consultant, School Plant Planning, Florida State Department of Education is gratefully acknowledged, in addition to the other committees and individuals whose work made this booklet possible.

INTRODUCTION

Educational planning for new school facilities is the organization and the preparation of a written statement of the school program to be housed. This is the responsibility of the educator in order to fulfill his role as a professional planner and to determine the direction education should take in fulfilling the purposes set by public policy. Such planning should be under the responsible direction of the educator-planner whose training and experience qualify him for this role.

Without a definite specification of educational needs and requirements, the design solution to the educational problem becomes impractical, expensive, and usually unworkable. In such cases, the architect is at the mercy of the educator, if the educator fails to properly state the problem for which an architectural solution is required.

Quite often there is not sufficient time to do the educational planning required, as was the case for Alachua County. However, the need for Educational Specifications Committees for Alachua County was recognized by Mr. Talbot in April, 1966 when he asked that these committees be organized and instructed in regard to the work which must be done.

These committees were structured to include:

1. Teacher representatives from each grade level and subject area in the curriculum.

2. Interested citizens from each geographical area containing a school site.

3. School staff personnel to represent various instructional and noninstructional areas.

4. Professional consultants such as architects, local and otherwise.

5. A representative from senior high school student councils invited to attend the general committee meetings.

Duties of the committees included:

1. Formulating and stating the objectives of the schools.

2. Listing the critical minimum facilities necessary to meet these objectives.

3. Listing desirable facilities to supplement these minimum facilities.

4. Using the least possible number of words to state the objectives and facilities; using diagrams to represent the translation of the objectives into facilities, when possible.

Reports of the committees were completed May 31, revised August 26 and September 29, 1966, realizing that time did not permit the degree of excellence desired for this report.

Instructions to the committees are included here to further explain the purposes of this booklet.

TO: Persons Interested in Educational Specifications Committee Work

FROM: Virginia Flanigan

RE: Overall Planning for Educational Specifications Committees for Alachua County: goals, roles, and duties for committees and persons involved in this work

Educational facilities planning is necessary if Alachua County receives the most value for each dollar spent on building new schools and additions to existing schools.

The use of a wide representation of teachers and citizens throughout Alachua County to formulate a standard set of educational specifications for Alachua County as a whole, based on requirements stated in the minimum standards of the recent state survey, seems the best way to provide architects with a concise picture of needs in the schools.

County-wide committees have been structured according to subjects, grades, and areas in elementary and secondary divisions. These committees are tentative at this point, since anyone who prefers to serve on a committee other than the one on which he or she has been placed will have the opportunity of stating a choice and being reassigned.

The primary purpose of these committees is to determine minimum facilities to carry out an effective instructional program and to write these facilities in a form which will communicate the needs to the architect. Architects cannot make decisions concerning programs of instruction which are used in schools. Educators cannot prepare plans for construction of the facilities. Most citizens cannot do either of the two above tasks. Consequently, it becomes necessary for the educators and the lay citizens to establish the objectives of the schools as such objectives relate to the philosophy of education. When the philosophy and objectives are agreed upon and noted in writing, the needs of the school plant are to be listed within the framework of policy established by the county, state and Southern Association. The architects have the responsibility to provide the design solution which best answers the requirements of the educational program and the budget.

The committees should project their thinking into the immediate and distant future when facilities will be ready to meet the needs of future programs of study; they should be acquainted with research which has been done relative to various fields and trends in education. Both specialists and generalists are needed.

The responsibility for answering questions regarding the instructional program should fall to the instructional staff. Teachers, supervisors, and administrators are included on the committees. Rural and urban areas are represented. Special areas which complement instruction, such as guidance, administration, library, cafeteria, playground, and those necessary for smooth operation of the plant, such as storage, and work space for maintenance and operation, and site considerations (transportation, service drives, parking) should be planned with the aid of the people who use these areas.

The role of the pupil in an advisory capacity is recommended for secondary school planning; they can supply a point of view which is necessary.

Several pages of outlines and suggestions from the Florida State Department of Education are attached to this page. Please study and discuss these and any other materials you may wish to use, such as state and Southern Association accreditation requirements, the recent state survey report of Alachua County Schools, copies of individual school philosophy and objectives, etc.

Each committee should report its recommendations in writing at 7:00 PM GHS teaching auditorium, on the date specified: Tuesday, May 24 is due date for these committees; English, Social Studies, Math, Science, Foreign Languages, Physical Ed, Driver Ed and Health Ed, Business Education and VOE, Home Ec, Vocational Agriculture, Art, Music, DCT. Monday, May 30 is due date for these committees: Administrative, Clinic Suite, Teachers Office, Planning and Work Space, Masonry, Tailoring, Food Service, Site Planning, Assembly and Multipurpose Room, Special Education, Speech Correction and Reading, Storage and Work Space for Custodian, Restrooms, Shop and Industrial Arts, Library and Audiovisual, Guidance.

The committee reports will be bound in a booklet entitled Educational Specifications for Alachua County, such booklets to be used by architects, educators, lay people, and others who are interested in school plants.

American Society of Civil Engineers
Gainesville Branch

PHYSICAL SECURITY AND OUR SCHOOLS

A school constructed in an architectural style or form with the following general characteristics offers much greater protection to its occupants against both natural and man-made disasters such as hurricanes, tornadoes, floods, and nuclear attack:

1. The clustering of rooms horizontally into a compact floor plan rather than into lines of rooms forming many wings.

2. The stacking of rooms vertically into two or three floor levels instead of one.

3. The general replacement of window area with masonry wall, and the efficacious location of remaining windows.

4. The use of central air conditioning and heating.

5. The use of elevated planters to decorate and shield entrances.

Furthermore, it has been shown that the cost of a style following these characteristics is likely to be less than that of the traditional glass-spread style. Each of the first three characteristics generate savings which probably will more than pay for air conditioning, and perhaps allow the heavier roof and extra reinforcement in pilasters and at joints which make further contributions to structural protection capabilities.

These savings result from the reduction, because of compactness, of the relatively expensive, outside, decorative and weather-resistant areas; the replacement of window areas by less expensive masonry areas; the use of cantilevered or continuous joists made possible by clustering; the reduction of heating (and cooling) costs by the superior heat- (and cold-) retentive properties of compact arrangements and of masonry compared to glass; the reduction in land-area requirements with use of a compact structure; and the reduction in janitorial and maintenance costs obtained with a compact, air conditioned structure.

Of course, the superior control of noise, lighting, temperature, humidity, and dust are educationally important bonuses of this type of construction.

Since different architects tend to cultivate and follow characteristically different styles and structural forms, it should be noted that these savings may not be realized by an architect committed in his sympathies, and geared in his practice, to the traditional glass-spread style. Almost certainly, plans prepared in the new style will require, initially, considerably more innovative effort, education of his staff, and time, and thus cost more, not to mention possible extra cost in the building itself because of inexperience in this style. Therefore, to gain the maximum realizable economies and benefits, which will more than justify this style, it is important that an architect who is at least sympathetic to this style be engaged.

In conclusion, we strongly recommend the adoption of these features as a policy in future school construction for Alachua County, because school buildings of this type will contribute not only to the effective education and comfort of our school children, but to their protection and even survival in the event of natural or man-made disasters, not to mention any superiority these features afford in contemporary aesthetic appeal.

JUNIOR HIGH SCHOOL

Maximum Pupil Capacity 1200
(1315 Stations)

No.	Facility	Net Sq.Ft. per unit	Net Sq.Ft.	Pupil Capacity per unit	Total Pupil Capacity
25	General Classrooms	@900	22500	@30	750
6	Science Demonstration Room	@1050	6300	@30	180
1	Arts & Crafts Room (plus storage)	@1200	1200	@20	20
1	Cafeteria	@6600			
1	General Music Suite to include: instrumental, vocal, storage, practice rooms, ensemble rooms (2 teacher station)	@3200	3200	@80	80
1	Language Laboratory Storage (full time teacher station)	@1000	1000	@30	30
1	Homemaking Suite (2 teacher station)	@2700	2700	@20	40
1	Large Group Instruction Room	@2500	2500		
1	Exceptional Education Room (full time teacher station)	@900	900	@15	15
1	Gymnasium with fold out stage	@10200	10200	@80	80
	2 Classrooms	@900	1800	@30	60
	Shower & Locker Suite	@6000	6000		
1	General Shop Complex Industrial arts, metal work, mechanical drawing & graphics, related teaching space, storage, (2 teacher station)	@4600	4600	@20	40

JUNIOR HIGH SCHOOL (continued)

No.	Facility	Net Sq.Ft. per unit	Net Sq.Ft.	Pupil Capacity per unit	Total Pupil Capacity
1	Agriculture Suite (including related teaching space, office, shop, storage)	@3000	3000	@20	20
	Seating area	@3600			
	Production Room	@350			
	A.V. Storage	@250			
	Magazine & Pulp Storage	@120			
	Library work room & office	@300			
	Professional material preview, multiple use space, conference area	@180	4800		
	Administrative Suite	@2600	2600		
2	Student Activity & Conference Rooms	@120	240		
7prs.	Toilet Rooms (Pair for for each set of six teacher stations)	@200	2800		
	Storage, mechanical heating, cooling, custodial space, books & central materials, etc.	@3000	3000		
TOTAL			85940		1315

SENIOR HIGH SCHOOL

Maximum Pupil Capacity 1600
(1675 Stations)

No.	Facility	Net Sq.Ft. per unit	Net Sq.Ft.	Pupil Capacity per unit	Total Pupil Capacity
29	General Classroom	@750	21750	@30	870
1	Science Complex as follows:				
4	Science Demonstration Room	@1050	4200	@30	120
2	Science Laboratories (full time teaching station)	@1500	3000	@30	60
1	Resource Unit, storage, planning, group teaching, live animal room, office	@3000	3000		
1	General shop complex as follows: Industrial Arts, metal work, mechanical drawing & graphics, related teacher space (2 teacher station)	@4600	4600	@20	40
	Arts & Crafts Complex (2 teacher station & storage)	@2000	2000	@20	40
	Band Suite	@2650	2650	@40	40
	Vocal Music Suite	@1600	1600	@40	40
2	Language Laboratories classroom & storage	@1000	2000	@30	60
	Homemaking Suite (2 teacher station)	@2700	2700	@20	40
	Team Teaching Room	@2500	2500		
	Gymnasium (includes concessions, entrance, toilets) as follows:	@11000	11000	@80	80
	Shower & Locker Room	@7500	7500		
	Multi-purpose Room	@1500	1500		
	2 Classrooms	@900	1800	@30	60

SENIOR HIGH SCHOOL (continued)

No.	Facility	Net Sq.Ft. per unit	Net Sq.Ft.	Pupil Capacity per unit	Total Pupil Capacity
2	DCT & DE Rooms & Office	@900	1800	@25	50
3	Business Education Room	@1200	3600	@35	105
2	Vocational & Technical Shops as follows:				
1	General	@2000	2000	@20	20
1	Agriculture Shop, related teacher space office & storage	@3000	3000	@20	20
2	Exceptional Education Room (full time teacher station)	@750	1500	@15	30
	Auditorium	@10000	10000		
	Materials Center as follows:				
	Seating area	@4800			
	Production Room	@600			
	A.V. Storage	@500			
	Magazine & Pulp storage	@220			
	Librarian work room and storage	@600			
	Professional material preview, conference space & multi-use storage	@280	7000		
	Cafeteria	@8000	8000		
	Administrative Suite	$4000	4000		
3	Student Activity & conference rooms	@140	420		
9	Toilet Rooms (pair for each set of six teacher stations)	@200	3600		

SENIOR HIGH SCHOOL (continued)

No.	Facility	Net Sq.Ft. per unit	Net Sq.Ft.	Pupil Capacity per unit	Total Pupil Capacity
	Storage, mechanical heating, cooling, custodial space, books & materials, etc. to include lounges (1 per 15 teachers), teacher work area, office space, curriculum specialist	@4000	4000		
TOTAL			120720		1675

EDUCATIONAL SPECIFICATIONS FOR THE ADMINISTRATIVE SUITE AND GUIDANCE

Since the administrative suite is the hub of all activity in the school center it should be situated so that it is easily accessible, possibly as a "pod" or unit on one corner. It should be near the entrance to the building and should contain a major part of the Pupil Personnel Offices (testing, speech-correction, reading, guidance, psychologist). The instructors should have easy access to the office and to the school files. It is also necessary that the teachers' lounge, conference rooms folding doors*, (large room) be close by.

This administrative suite should be well furnished, have adequate outlets, both phone and appliance, have a smooth flow of traffic, yet be isolated from the ordinary noises of the school. It is suggested that the following offices and rooms be included in the administrative suite: Multiple jacks for intercom and (privacy) total structure air conditioned.

I. Office of the Assistant Principal (Assistant Principal for curriculum (sec.) office in library area - with professional library and teacher workroom)

This office should contain:

A. Teacher's desk and swivel chair

B. Work table and four chairs

C. 4-drawer filing cabinet

D. Telephone jack

E. Intercom extension

F. Bookshelves on all available wall space

II. Office of the Administrator (Principal) (Assistant Principal for Administration; separate offices for Dean of Boys, Dean of Girls, and private secretary. Provide walls that can be expanded for more office conferences. Include another office like this one for the night principal since the night school enrollment will justify this by the time buildings are constructed.)

A. Desk of ample size

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*There is a type of separating door - sliding wall made in Bradenton, Fla. for $7.00 to $8.00 per square foot; used effectively in West Palm Beach. This door-wall has a noise reduction coefficient of .40 decibels, same as an 8 inch block wall, and can be bought with chalkboard or tackboard surface.

B. Swivel chair

C. One 4-drawer file

D. Ample bookshelves

E. Pencil sharpener

F. Synchro clock

G. Index file

H. Curtain or drapery rods

I. Outside exit

J. Interoffice intercom

K. Large enough to accomodate conference of at least six persons

L. Appropriate conference chairs of good quality

M. Entrance to adjacent secretarial offices

III. Office of the Secretary or Secretaries

A. Act as a buffer between reception room and the administrator

B. Be pleasantly painted and furnished

C. Be as quiet as possible

D. Be so arranged that no traffic passes behind the desk of the secretary

This office should contain:

A. Secretarial desk and swivel chair

B. Electric typewriter, stand, and chair

C. Intercom system within easy reach of secretary

D. No-glare lighting

E. Ample phone and jacks

F. Interoffice intercom station

G. Fire control center

H. Ample floor and wall outlets

I. I.D. file

J. Four chairs

K. Letter racks for desk

L. Bulletin board

M. Waste baskets

N. Telephone switchboard with adequate trunk lines, isolated in alcove

O. Small area for wall shelves

P. Electronic data processing area

Q. Microfilm equipment reader and printer, file films (separate room)

IV. Secretarial workroom - (to be locked from students)

This office should contain:

A. Electric duplicator - liquid

B. Mimeograph - electric

C. Work table for bookkeeping

D. File cabinets

E. Swivelchair

F. Toilet, lavatory, and closet

G. Copying machine

H. Waste baskets

I. Towel and soap dispenser

J. Ample outlets

K. Supply cabinet

L. Good lighting

M. Storage of office supplies, mimeos, etc., paper storage

V. Safe Storage Room

This office should contain:

- A. File cabinets
- B. Storage wall
- C. Fireproof safe or vault
- D. Recessed key cabinet
- E. Adequate outlets
- F. Small table and chair
- G. Files containing cumulative guidance records should be placed so that Security of the Records is unquestioned but where they are accessible to teachers and other school personnel who must use them. Secretary should sign all records in and out.

VI. Reception Room - Adjacent to Secretary's Office: (Space for 8 to 10 people to wait)

- A. Separated from secretary's office by paneled lower half and plexiglass upper half
- B. Writing table for filling out forms
- C. Settee and chairs
- D. Wall shelves
- E. Intercom connection
- F. Pay telephone just inside main entrance

VII. Teachers' Lounge

- A. Large enough to accommodate at least fifteen persons
- B. Convenient to the administration offices and files
- C. Contain toilet facilities for at least three persons (Faculty toilets for men and women accessible from service hallway, not part of teachers' lounge
- D. Carpet the administrative area and teachers' lounge
- E. Wall shelves on at least two walls

F. Study table of appropriate height and chairs to match

G. Comfortable seating for fifteen

H. Appropriately finished and furnished

I. Should have coffee maker and drink machine

J. Should have bulletin board and chalkboard at least 4' x 4'

K. Should have refrigerator

L. Should have pencil sharpener

M. Should have telephone

N. Should have waste baskets

O. Outside entrance

P. Alcove, separate from lounges for teachers' mail boxes - for county and U.S. mail - outside delivery chute, sorting table, outgoing bin, etc.

VIII. Clinic - Emergency Holding Area Only

A. Wash basin, shower, toilet, soap and towel dispenser for each sex. Accommodations for two pupils at a time

B. Large storage cabinet with lock (store 2 stretchers or folding cots for emergency)

C. Well-stocked first aid cabinet

D. Desk and chair for attendant

IX. Physical Facilities for the Secondary Guidance Program

A. Philosophy

The basic functions of the guidance office personnel are to assist students in the appropriate choice of school subjects, to counsel students, and to help them in their choice of colleges; to look into the vocational interests, and confer with parents on the student's personal and school problems.

B. Guidance and its goals

The guidance staff has two concurrent goals:

1. Counseling students on developmental needs and at decision

points in the student's life rather than remedial needs and crisis points with the ultimate goal being understanding, increased self-responsibility, and maturity in decision making.

2. Assisting the faculty in understanding the many facets of a student's life and providing framework to build a more individualized program of instruction by helping teachers understand the changing student population, its needs and characteristics as an individual and as a group.

3. More is expected of our schools today than ever before in the history of education. We are asked both to make children social and to release their unique potentialities, to make them practical and idealistic; visionary and sensible; patriotic and broadly human; sensitive and tough. Our society demands that we attempt this task; our conscience tells us we must master it.

C. Location of the guidance services department

In order to be easily accessible to pupils, teaching staff, administrators, parents, employers, and youth who have graduated from school, and all others, counseling services should be located in the administrative suite. The guidance unit should be located near related pupil personnel services such as pupil accounting, health, psychological services, home social worker, and pupil research. The guidance services unit should be readily accessible to faculty members and students but not a public thoroughfare. The guidance services unit should be an integral part of the administrative suite. It should be accessible to parents and representatives of community agencies. Sufficient space should be allocated to provide for such guidance functions as private counseling, small group conferences, and informational services. Five private rooms, one for each of 4 full-time counselors, and the psychologist, should be approximately 6' x 8' to provide for individual and small conferences.

D. Space

Requirements for space may be analyzed in terms of the various services of the total program.

1. 5 private counseling and/or conference rooms (approximately 6' x 8' with display racks, bookshelves.)

2. Small group conference rooms - 1 large room 10' x 15' divisible

3. Reception area

4. Clerical services area

5. Space for the information service files of the educational, occupational, and social information

6. Space for charts, slides, and films of the information services

7. Space for the placement service

E. Size of the counselor's office, conference room, etc.

1. The counselor's office needs from 48 to 60 sq. ft.

2. Conference room should have 150 sq. ft. The reception area should have 150 sq. ft., and the receptionist should have an additional 20 sq. ft. The space for guidance records is about 3 sq. ft. per 200 students. (24 sq. ft.) Space for information and service files is about 25 sq. ft.

3. A counselor's office needs the following basic equipment:

   a. Desk and chair for counselor, plus two straight-back but comfortable chairs
   b. Filing cabinet with lock - one file for each 800 students
   c. Bookshelf for professional publications and references
   d. Telephone

4. In the reception area, a secretarial unit:

   a. Desk, chair, light, and typewriter
   b. A two-drawer filing cabinet
   c. Lounge and four occasional chairs
   d. Telephone with inter-com and confidential attachment
   e. Rack for magazines and other information
   f. Bulletin board
   g. Coat rack
   h. Storage cabinet
   i. Table - 3' diameter round, or 3' x 6'

Committee:

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EDUCATIONAL SPECIFICATIONS FOR
ART

Philosophy

Art is a part of the daily life of every individual, therefore junior and senior high school curricula should include learning opportunities for all youth.

Over-All Objectives

1. "To develop initiative and integrity in the visual interpretation of the environment
2. To discover possibilities and limitations of various media, tools, and processes in terms of solving problems of expression through visual art form
3. To explore and evaluate different methods of visual organization in relation to one's own needs, ideas, and purposes
4. To become familiar with, to understand, to respond sensitively to ways in which others have created art forms in education to their ideas, needs and purposes; and to develop a sense of respect for the work of others
5. To assist all the senses to become increasingly aware of aesthetic qualities in material and man-made forms
6. To relate methods and content or activities to the needs of the secondary school students in other aspects of their daily living
7. To explore the possibilities of art as a vocation
8. To develop a sense of responsibility toward and a respect for tools and media used in art."[1]

Description and Nature of Activities

"The purposes of art programs, in general, fall into two broad categories:

1. To provide a foundation for persons going on to an art career
2. To provide general art education for all students

---

[1] State Department of Education: "A Guide to Art For Florida Secondary Schools", 1965, pp. 16 - 17.

Often both purposes may be met within a single class when instruction is planned to meet individual differences.

Purposes of a program for persons going on to an art career should include gaining all orientation toward art career opportunities; acquiring a broad foundation in the visual arts; and being introduced to a sampling of such specialized fields as advertising art, theater arts, fashion illustration, interior design, architecture, and art education.

Purposes of an art program for general education should embrace acquiring a general cultural awareness of the visual arts, refining the perceptual and aesthetic sensitivities which are used in making discriminating consumer choices; and discovering some phase of the visual arts as a possible hobby. In all cases, balance between appreciation and studio experiences is imperative.

Although programs designed within the limits of either of these broad purposes should provide a wide range of art experiences, recent research suggests that opportunity for depth of exploration is equally important."[2]

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[2] State Department of Education: "A Guide to Art for Florida Secondary Schools," pp. 28 - 29.

Specifications

I. Facilities

"Art rooms are usually one of two types. There may be either a general multi-purpose art studio-workshop or a suite of individually designed art rooms where more than one art room is being planned for a school.

A. Art classrooms are being designed more and more like studio-workshop combinations for use as all-purpose rooms, favoring the inclusion of such separate quiet areas as library-lounges and planning areas.

B. More art departments are being planned with rooms which have movable walls or storage walls which permit an easy arrangement of space. Such flexibility in planning will allow for changes in enrollment and for enlarging the art program.

C. Where more than one art room is needed in a school there is a tendency to provide rooms of various sizes with different facilities for particular learning areas.

   1. In a junior high school with an enrollment of 1200 three such art rooms are considered necessary.

   2. In a senior high school with 1600 maximum pupil capacity a studio-workshop of larger proportions (2000 square feet for 40 pupils and 2 teacher stations and storage) is considered adequate.

D. Art rooms should be located on the ground floor.

E. Art rooms should have east-west orientation with predominant north lighting.

F. It is desirable to have art rooms located adjacent to, or at least near, the room used for scenery and property construction, costume making...

G. Where only one art room can be planned for a building, the all-purpose art room is the logical choice...

H. Display space other than that provided in the art department is being included in many school plans..."[1]

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[1] State Department of Education: "A Guide to Art for Florida Secondary Schools," pp. 126 - 129.

1. Size

"Under ideal conditions the art room should be determined by expected average class size. Thus the most workable solution would be the largest art studio-workshop 27' x 80' or 2160 sq. ft. are minimal.

2. Space - Planning should center on the art student who requires space that is generous in area, psycologically free and stimulating, and flexible enough to afford:

Varieties of sizes of working groups - large, small, individual

Varieties of activities - quiet, contemplative, research-centered, and material centered

Varieties of teaching techniques - formal, informal, use of audio-visual materials, guidance groups, and individual guidance.

3. Furnishing for work areas should include:

Counter-top work areas, easels, desks, benches, and walls, groupings for discussions and audio-visual and reference study, kiln with 220 volt AC and DC wiring.

4. There should be a location, 8' x 10', in which the teacher can have a work area - have a demonstration desk - keep his personal books and equipment, possibly a semi-enclosed portion of a general storage area - keep in filing cabinets reference work and records - store bulk materials in locker."[2]

5. Sinks

There should be enough sinks located away from the major traffic area to serve the group adequately. There should be at least two sinks for every 30 students, accessible from both sides with a counter top work area on each side.

Sinks should never be in a corner. There should be a special device, such as a plaster trap, to catch the clay and plaster that settle in the sinks. An acid-resistant, all-purpose double projecting sink giving access to three sides is ideal. It should be located reasonably near all working areas in the room, but not close to power tools or electrical outlets. Do not put a 220 plug near a sink! Sinks should be located against a ceramic tile wall and on a tile or water proof floor; equipped with four or more swivel spigots, each with hot and cold water controls; and should have a drainboard or built-in drying racks.

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[2] State Department of Education: "A Guide to Art for Florida Secondary Schools," pp. 130 - 131, 1966.

Stainless steel, monel metal, and soaptone sinks have been found most satisfactory for art room use. They clean easily and do not stain.

6. Storage

Storage areas should hold standard sizes of certain basic equipment. Adequate and organized storage of supplies and equipment is essential in maintaining an uncluttered art room. Good storage encourages correct use and care of supplies and equipment, guarantees ready accessibility of supplies, helps teachers keep correct inventories and note diminishing supplies, and simplifies ordering of new supplies. Six types of storage are required to meet the needs of the average art program:

a. Bulk storage of general supplies. A room that can be locked should be located adjacent to the art room and equipped with deep adjustable-height shelves of varying dimensions. These shelves can be mounted on casters for easy handling of large bulky materials. Some schools have a central storage space; others have individual store rooms for each art room. Whatever the arrangement, it must be controlled and maintained.

If possible, everything should be stored within reaching height, without requiring the use of a ladder.

Items should not be stored on the floor.

Use storage trays and racks for small tools and materials.

Narrow width vertical and low horizontal shelving is desirable for various types of paper storage.

Many art supplies can be stored on open shelving.

Cabinets with drawers, cupboards with adjustable shelves, and cubicles for the storage of 3-D objects should be provided in the general storeroom.

Bins should be provided for the storage of wood or large rolls of paper.

A comfortable high counter is useful in handling supplies, and at least one section beneath the counter top should be fitted with shallow drawers for storage of large illustrative materials.

Space is also needed for a station for a utility cart to be used in moving supplies to the classroom.

b. Tool and material storage. It is usually advisable to have tools located on wall panels adjoining the place where they are to be used. Portable panels are recommended when the tools are to be used in different rooms or carried to different rooms or different areas within a room. Special racks similar to drawing-board racks may be constructed to store tool boards.

c. Project storage. Adequate storage space is needed for partially completed art projects. Twelve-inch shelves mounted on the walls six feet from the floor are most useful for temporary storage of the on-going projects. Many projects are wet when in process or completed. The storage area must have many shelves and must be well ventilated for quick drying to prevent warp and mold and to eliminate spontaneous combustion or explosion. Aluminum or plastic trays which slide into grooved racks are excellent for storing wet work. Portable, waterproof trays are easy to carry, to work on, and to store with minimum amount of effort and minimum damage to work in progress.

Vertical racks on the top of shelves or cabinets permit storage for drying oil paintings or water-colors that are mounted and drawing boards.

d. Storage of student supplies and equipment. Locker space for small individual supplies and equipment and space for smocks, armatures, personal objects, books, and reference materials are needed.

e. Limited storage of supplies used daily in classroom.

Paper storage: Space should be provided for large and small sheets and rolls of paper. Dispensers, sliding tray-like shelves in under-counter space, and large shallow drawers with dividers in compartmented cabinets are desirable. Paper may be stored in rolls in bins; placed on rolls or dowel rods and fitted to wall brackets, or hung from ceiling arrangements as a space saver.

Clay storage: Containers for storing moist clay may be of several types. Metal-lined wooden cubicles fitted with casters for portable storage; clay-carts; and airtight cabinets for clay to be saved moist for further work are handy. Twenty-gallon plastic containers mounted on dollies provide ideal portable storage for clay, plaster, and vermiculite. A drying cabinet, free of dust and draft fitted with pegboard to promote slow drying, is desirable.

Oil painting and solvents: These should be stored in metal-lined fireproof cabinets or containers. Paints, acids, and cleaners should be stored in closed metal cabinets. Paint cans should be kept closed. Solvents, thinners, and cleaners should be stored in safety cans. All such material should be marked "caution," "poison," or "flammable," depending on their content. Promptly after use, oily rags and papers should be placed in metal waste cans with hinged covers.

f. Storage of reference material. Needed for flat and three-dimensional, illustrative, and reference material used by the teacher are a legal-size office file cabinet for mounts and reproductions, sliding shelves for large reproductions or mounts, and shelves or cabinets for three-dimensional objects.

7. Display facilities

There should be provision for display areas affording:

a. Space for two- and three-dimensional student works and works by mature artists

b. Open and closed areas, some of which may be locked

c. Areas in which art work can be seen by other students, visitors, and interested school personnel.

Wall cases should be fronted with flush-wall plate glass and should contain adjustable shelves. Back entry doors should permit easy installation and be fitted with corkboard and pin up of flat work. All cases should be fitted with locks and should be properly illuminated.

Wall surface should provide display surfaces for large work. Doors of cabinets can be covered with tack board or corkboard for display. Some wall sections with proper surfacing can be used from floor to ceiling for large displays.

8. Outdoor activities and facilities

An adjacent, outside concrete apron on patio will prove most useful for large projects, outdoor sketching classes, research in light and shade, color and light studies, sculpture, and figure drawing.

9. Provision for visual aids

Adequate provision must be made for the use of such visual aids as the opaque projector and the filmstrip or slide projector. This requires storage, blackout curtains, and electrical outlets. One should expect audio-visual aids including television to be used widely in the school. All art rooms should be provided with a recessed screen or one that may be pulled down.

II. General Suggestions for Further Study

A. Teacher work area: number of square feet, locker, portable or fixed demonstration table; cutoffs at teacher's desk for electricity, water and gas.

B. Dust control units should be placed in the crafts and industrial art rooms.

C. Use multiple floor outlets (110 volts) grounded, with protective caps.

Committee:

Helen Wallace
Helen Philpott
Ina Jo McKenzie

Note: Contact Sheldon School Furniture Company.

EDUCATIONAL SPECIFICATIONS FOR
AUDITORIUM

Purposes and Use of Auditorium

I. Introduction

As school plants seem to be used for 30 to 50 years, we cannot make recommendations which will fit only today's needs. We must project our thinking into the future even to the next generation. One needs only to look at the rapidly changing concept of teaching and the new technology which is accelerating this change to understand the necessity for recommendations which will result in as flexible design as possible.

Our charge is to specify what we need; not to determine whether or not we can afford it. We would feel remiss if we did not observe that in some cases an inadequate building may be undesirable in that it is difficult to change. This committee feels that we need building for an educational purpose not a building for the sake of having an auditorium.

II. Recommendation

In the Accreditation Standards For Florida Schools, 1963 edition, Section 5.942 (3) Activities Programs (level 3) "shall include.... extensive assembly programs of high level aesthetic and cultural nature, involving both student presentation and visiting cultural attractions." With the above in mind we make the following general recommendation:

A. Auditorium For General School Use

1. Primary purpose is for school wide assemblies which will include programs of drama, music, guest speakers, cultural films, and other kinds of programs involving the total student body. (Not at one time - auditorium should be smaller, several performances of plays, concerts, etc. rather than one. Build auditorium to seat the largest class, i.e., 600 seniors. An enrollment of 2000 would need seating capacity of 700. Past 600-650 seating capacity presents grave seating problems; too much depth in structure presents electronic gear expense.)

2. Lighting and light control shall be of such a nature that the stage can be properly lighted for dramatic productions. Fluorescent lighting for stage - have 2 lighting systems for auditorium so that testing, etc. can be done - 65 ft. candles provided for central area too. The seating area should be

well lighted also, seating and lighting suitable for use in class lectures, demonstrations, etc., i.e., folding tablet arms (in limited number).

B. A projection booth for film is a necessity with projection equipment (and amplifying equipment) designed for auditorium use, with properly planned, fire proof storage. (Adequate scenery and costume storage needed. Architects put cans, cable, etc. in, but we buy as equipment all the sound gear rather than have contractor install wrong things.)

C. Dressing rooms should be adjacent to the stage with proper equipment for applying make up as well as rest room facilities.

D. As the stage must seat a one hundred piece band a fly gallery with excellent rigging is essential. Use carpeted steps at front of stage to provide seating of large chorus or band; big instruments in back.

E. Access to outside backstage must be large enough for the movement of very large items, i.e., scenery, furniture, scaffolding, etc. (Reduce height above stage. Roll up curtains and backdrops.)

F. Custodial supplies should be located back stage in an area large enough to serve as a storeroom for all upkeep equipment used in this area.

G. The auditorium should be adjacent to the parking area and be a buffer between the classroom area and parking area.

H. The public should be invited to activities such as music, drama, etc.

I. Lobby should be large enough to distribute programs, have drinking fountains, access to restrooms, and room for easy movement into the main hall.

J. A technical office should be designed as such and not just as a small area from which tickets can be sold.

K. The auditorium should have facilities for an orchestra pit for the production of musical plays.

L. The music area should be at the rear of the auditorium, and share in joint use, of the auditorium complex. Speech and drama classrooms should be adjacent to this complex.

M. The stage should be usable without closing the auditorium to other group presentation. (See practice stage in music complex and other classrooms.)

N. Seating which is standard is inadequate for taking notes or tests. Use tablet arm (folding arms) seats.

O. Acoustics should be such that a person on stage in a dramatic production or lecture should have no trouble projecting his voice.

P. This whole area should be climate controlled.

Committee:

Joe Lowe
Mary Elliott
Marguerite Rhea
John Perdue
Dorothy Reaves
Joe Johnson

EDUCATIONAL SPECIFICATIONS FOR BUSINESS EDUCATION

1. Size of Classes

Typing I	60	96' x 30' room (front of room to face long side)
Typing II	30	36' x 30' room
Shorthand I	30	36' x 30' room
Shorthand II	30	36' x 30' room
Bookkeeping I	30	36' x 30' room
Bookkeeping II	30	36' x 30' room
Business English	30	36' x 30' room
Business Law	30	36' x 30' room
Business Math	30	36' x 30' room
Economics	30	36' x 30' room
General Business	30	36' x 30' room
Office Machines	20	48' x 36' room (to be divided into 4 areas)

2. Electrical service

Typing II, Shorthand II room:	30 double outlets
Bookkeeping I, II room:	30 single or 15 double
Business Machines room:	10 single and 10 double

(Master switch operated by a key recommended by Monograph 112, S-W)

3. Length of Chalkboards

Typing classes	20'	(Typing I classroom to be on long side)
Shorthand classes	20'	
Business classes	20'	
Bookkeeping classes	20'	
Business Machines	10'	

4. Chalkboard Functions

Shorthand:	10'	should be lined board with lines 4" apart, one way (horizontal)
Bookkeeping	10'	" " "
All others	Plain	

5. Floor Coverings

All floors should have acoustical floor coverings* to keep down noise on tables sliding out of line and to cut down on dust and hair blowing into machines.

If tiled floors, vacuum cleaning equipment must be provided to eliminate the dust problem and thus cut down on cleaning bills on machines.

Aisle space, both vertical and horizontal, should be provided at 30" between rows of tables.

6. Storage Requirements

All business education rooms (except the general business room) must have cabinets with locks, at least 20' to 30' long, for storage of supplies, equipment, textbooks, and small machines.

Work space should be provided between top and bottom cabinets 30" high and should have formica tops and built-in light over this space.

Closet space with rod for hanging coats away from seats at machines.
Full-length mirror to be on end or side of closet in classrooms used for Office Machines and Office Practice (Typing II).
Wall cabinet with mirror and light above a wash-up basin. (Cabinet is for storage of cleaning agents.) Ink gets on face at times! This should be in all rooms (except the General Business room).

4-drawer filing cabinet for each teacher using a room.

7. Relationship between various rooms in business suite

Machines room must be separate from all other rooms.

Shorthand II, Typing II and Business English may occupy the same room.

Typing rooms must not be used for any other type of teaching except Shorthand and Business English.

Business Law, Business Math, Economics, and General Business may occupy the same room.

Bookkeeping must occupy a separate room with tables.

Teachers' offices may be centrally located in one large room which contains a business education library and resource materials, audio equipment and partitioned off into separate space for each teacher.

8. Business suite in relation to remainder of school

Business suites must not be near noisy areas such as P.E., Band, Chorus unless air-conditioned and closed up.

They may be isolated from library, Home Ec., Art.

May be isolated from other subjects.

*Do not use vinyl carpeting; seams show and break apart. Acrilan carpets @ $9.60 per square yard, as used in West Palm Beach, should be investigated.

Must be near a street for access for trucks delivering and removing machines for repairs, etc. Should be on ground floor.

9. Business suite and possibilities for night use and after hours accessibility

   Must be near large parking area for night school use as well as for day school students in work programs who drive cars to school and work half a day. Could be isolated from other parts of school for this purpose.

10. Teaching aids needing special storage

    Projector,either the teacher desk-type or on rolling table.

    Film storage in one set of top cabinets with shelves close together 3" apart. This could also be used for record storage and tape storage. (This is to be in each room if no centrally located library or resource area is provided.)

    Overhead projector may be stored in wall cabinet with lock.

    Wall cabinets mentioned in #6 will take care of other storage.

11. Hand washing facilities

    Mentioned in #6.

12. Artificial illumination

    Must be especially intense and white light or fluorescent light overhead.

    Fluorescent light shaded over chalkboard in shorthand and bookkeeping rooms is important for night school teaching.

    Complete darkening facilities needed for AV or TV teaching.

    Dimming switches are nice to control light when showing films or viewing TV.

13. Additional electrical outlets required in addition to typewriters

    Double wall plug in front of room (center) for connecting teacher demonstration equipment.

    Three double wall plugs over counter areas and double outlets as described in #2. Plug-ins for typewriters or any machines must be up off the floor to stand up the same height as the tables in conduits, so wires are not on the floor to get tangled by feet and chair and table legs and sweeping. Wall plugs are impractical for student use.

14. Purposes these outlets serve

Electric typewriters, adding machines, calculators, transcribing machines, key punch machines, mimeograph and other duplicating machines, bookkeeping machines.

15. Types and sizes of typing tables and other special types of furniture

Typing Tables	3' x 4'	
Machine Tables	3' x 4'	Adding and calculating machines
Bookkeeping Tables	3' x 4'	
Shorthand Tables	3' x 4'	
L-shaped Tables or desks	3' x 4'	with 2' x 3' arm or L for Transcribing, Bookkeeping, or Shorthand

Each table to have an adjustable secretarial chair on rollers for adjusting to various heights of students who must use machines.

16. Audio visual aids storage

Roll-up movie and overhead projector screen over chalkboard in front of room.

Bookkeeping chart case mounted on wall over chalkboard or on front side of room above chalkboard.

Map case mounted over chalkboard in Shorthand II - Typing II room.

Fixtures for handing built-in sliding chalkboards if these are provided.

Loud speaker or voice amplifier for Typing I room to be built-in or special plug-in for portable microphone in fron of room, PA system and cordless microphone.

17. Audio visual aids stored in business suite or otherwise

These should be stored in a business education library or resource area easily accessible as this equipment is used daily.

18. Large group space

One large typing room which could be partitioned off into two sections for faster and slower students needing special instruction.

This room could be used for lecture, TV or movies occasionally to large groups if typewriters were covered and moved to one side of the table.

19. Window screens for night use

Window screens are necessary for night use unless building is air-conditioned.

20. Air-conditioning

Should be available for typing & office machines because of the noise and dust problems mentioned under #5.

21. Bulletin board space is badly needed to display student work or for teaching various units. 12' to 20' is needed in each classroom except office machines.

22. Special: Office Machines Room Specifications

Size: 48' x 36' to be partitioned into areas with teacher's desk area to be 10' x 12', open.

Divide area into four equal spaces with plexiglass or clear-view material extending from wall toward center of room.

Chalkboards: 7' at end of each section, $3\frac{1}{4}$' above floor.

Projector screen over chalkboard in duplicating-voice writing room only.

Overhead and under work counter cabinets with 3 shelves overhead, 2 shelves under; double doors with locks on each set of doors, counters to be 14' along 2 sides of room; PBX console in voice-writing room.

Coat hanging section with rod at end of each section of calculating and duplicating room 5' long unenclosed except at end, end to have full-length mirror. Shelf above rod for purses, shelf 6' from floor.

Hand washing facilities as in #6: wall cabinet with mirror and light above a wash-up basin in duplicating room.

Teacher's desk to have counter-height (two-drawer) file cabinet beside it. (This is in addition to 4-drawer file cabinet for student folders, lesson assignment sheets, etc.

An area for teaching PBX should be in one classroom.

Desks to be L-shaped for six voice-writing stations with three 3' x 4' tables in this room for duplicating tables. Nine 3' x 4' tables in each of the other three rooms.

Padded, adjustable, secretarial chairs to be at all student stations and teacher's desk to simulate an office.

Four 14' work counters with cabinets; locked doors above and underneath these cabinets.

Committee:

Irene Newton
Sara Brown
Louise Hines
Frances Anderson
Martha Rau
Catherine Mickle
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Alice Esposito
Barbara Cone
Linda Howell

EDUCATIONAL SPECIFICATIONS FOR CUSTODIAL STORAGE SPACE AND FACILITIES AND HIGH SCHOOL TOILET FACILITIES

Toilet facilities should be placed where they can be most easily supervised and are the most convenient for the pupils. Boys' and girl's toilets should be at opposite ends of wings.

There should be separate toilet facilities for students, faculty, custodial and lunchroom personnel.

Auditoriums, Homemaking Departments, Industrial Arts Shops, Vocational Agriculture Departments, and School Clinics or other buildings separate from main building, should have individual toilet facilities. A restroom equipped with a shower convenient to the Industrial Arts and Agricultural Shop area is recommended.

Girls' multiple toilet rooms should contain lavatories, water closets, paper holders, mirrors, including one full length mirror, liquid soap dispensers, paper towels, hooks for coats, strong, well built shelves for books near entrance, waste containers, and sanitary napkin machines.

Boys' multiple toilet rooms should be equipped with lavatories, water closets, urinals, paper holders, mirrors, liquid soap dispensers, paper towel holders, hooks for coats, shelves for books near entrance, and waste containers. All materials should be durable.

Recommended minimum number of toilet fixtures for gang toilet rooms should provide for the pupil capacity of the school according to the following ratio:

Fixtures	Girls	Boys
water closets	1 - 30	1 - 50
lavatories	1 - 40	1 - 40
urinals		1 - 30

The girls' toilets should have five water closets and four lavatories. The boys' toilets should have three closets, five urinals and four lavatories.

For staff members and visitors the school needs two restrooms which do not open into the faculty room, but are situated near it. The ladies' room should contain:

1. At least two commodes

2. Powder room adjacent to toilet room

3. Two lavatories
4. Vanity and stool
5. Enclosed space for personal storage for teachers
6. Horizontal mirror above vanity and lavatories
7. Full length mirror on door
8. Running hot and cold water

The men's toilet room should contain the following:

1. One enclosed commode
2. One urinal
3. Two lavatories with hot and cold water
4. Medicine cabinet and electric outlet
5. Shelf

Stall partitions should be made of rustproof, non-corrosive, opaque material and extreme care should be used to secure them properly. Partitions should be at least six feet high, commencing about one foot above the floor. Girls' toilet stalls should be provided with flush doors, non-corroding hardware and rubber bumpers.

Destructiveness, vandalism and sanitation are common problems and especially so in boys' restrooms. Where possible, it is recommended that measures be taken to help with these problems. Anything hung from wall or ceiling is desirable rather than attaching things to floor and creating cleaning problem. The following, where feasible, is suggested:

1. Floor drain in each toilet
2. Toilet floor must be constructed with ceramic tile or a similar impervious material.
3. Wall surfaces must be constructed of ceramic tile to a height of six to eight feet.
4. All toilet fixtures should be substantial, attractive, and made of material that can be easily cleaned, non breakable, bolted to wall.
5. All restroom fixtures, hardware, etc., should be made of a non-corrosive material or specially treated to prevent this problem.

6. All fixtures, where possible, should be built in to eliminate breakage. This would include shelves, soap dispensers, paper towel and toilet paper dispensers, and coat hooks.
7. Water closets, lavatories, urinals and stall partitions should be wall or ceiling hung as an aid to sanitation and cleaning.
8. Protective covering should be placed on doors where hands and feet mar.
9. All light fixtures should be shielded.
10. All window frames should be of aluminum construction and have obscure glass panes.
11. Ceilings should be of plaster construction and coated with washable paint.

Positive ventilation is essential for toilet rooms. A proper temperature in the toilet rooms should also be provided. Automatic temperature controls are desirable, but the thermostatic devices should be installed in such a manner as to prevent vandalism. Toilet areas should be maintained at cooler temperatures than other areas of the building to cut down on "lingering."

The entrance to toilets should be placed in such a manner as to prevent visibility to the interior from the corridors, but not create a bottleneck, maybe one entrance and one exit door - use safe hardware. Lavatories should be placed so that students will pass them as they leave the toilet room. All doors should open so that they do not obstruct or block passageways, staircases, corridors, etc. Adequate space should be provided for those waiting and to allow restroom traffic to flow freely with no sharp turns.

Provisions need to be made so that the custodian may cut off the water supply from each fixture or a group of fixtures when repairs are needed. This feature should not be accessible to students.

Adequate drinking fountains should be provided outdoors with a minimum of one for each 75 pupils, included in original building plan.

Custodial Storage and Facilities

Adequate custodial facilities are essential and necessary for a clean, attractive, well kept school plant for grounds that will reflect the pride of school system. They are also extremely important to the smooth functioning of the school.

Several facilities are needed to keep the school clean, in good repair, and to provide an environment conducive to good health practice. The following should enable a custodial staff to give maximum service to the school.

Central Storage and Receiving Area: This space should be centrally located in the school plant and in a service drive for convenience of delivery. A receiving area is needed for all deliveries, many items must be kept for a few days before distribution to individuals. From this area small quantities of custodial supplies are distributed to small service closets. The following should be provided in this area:

1. A work bench for minor repairs
2. A locked tool cabinet
3. A minimum of 200 feet of heavy duty shelving for storage of cleaning supplies. This shelving should be adjustable.
4. Floor space for 55 gallon drums in cradles
5. Adequate storage area for supplies, space for desks, chairs, tables, stage props, etc. Minimum of 1000 feet or one foot per enrollment is recommended.
6. Electrical outlets should be located in convenient places with one being located over the work bench.

Custodial Office and Shower Room: This office should be located adjacent to the central storage room. It should be large enough for a desk, filing cabinet, lockers for personnel, bulletin board, connection with intercommunication system, single shower and toilet.

Small Service Closets: These closets should be located conveniently throughout the plant; preferably near toilets. Each should be equipped with hot and cold running water, slop sink, shelving for paper towels, toilet paper, and cleaning supplies. Service closets should be large enough to house custodial service trucks, 4' x 3' x 2'.

Yard Tool Storage: This space should be detached from the main school plant because of a possible fire hazard due to storage of gas, oil, paint, lawn mowers, etc. Double doors are required to permit entrance of mower, wheel barrows and other large items.

Committee:

Bill Irby
Tommy Tomlinson
John Rawls
Bob Prine

EDUCATIONAL SPECIFICATIONS FOR DRIVER EDUCATION

The objectives of the driver education course include: teaching road rules, teaching driving skills and, most important, developing proper attitudes for living safely with fellow citizens. We teach students to drive, but like any other phase of the curriculum, developing a good citizen is the primary objective.

The need for proper facilities is two-fold: (1) with a unit simulator and driving range one instructor can teach 240 students, and with a twelve unit simulator and range one instructor can teach 275 students. This is opposed to 125 students per instructor under the conventional 1 student, 1 instructor situation. Reimbursement is figured on the conventional 125 student set-up, therefore, we save money. (2) With the simulator and range we can do the same quality of teaching under safer conditions. Another factor involved is that in many situations driving ranges are used much of the year for physical education.

Physical facilities needed:

A classroom, 1000 sq. ft., (750 for classroom and 250 for storage) equipped for the teaching of driver education, health and safety education. Such a classroom should have 3' x 20' bench type shelves for display and storage (locked cabinet doors beneath shelves.) Provisions made for use of AV materials, i.e. projectors, wide screen or painted wall surface with proper room darkening facilities, blackboard 20', bulletin board 20'.

The laboratory area includes driver training simulator and a fenced paved driving area, for off street training, of at least 200' x 300'. This area would be used for storage of cars when not in use as a laboratory. Classroom should be close to laboratory area. Tables 2½' x 6' and chairs for students, table type teacher's desk and four drawer locked file, teacher's chair, magnetic board, signs for the range, fire extinguishers for laboratory, range, and in each car; magazine rack to display at least 20 magazines and pamphlets, 50 traffic cones, 2 first aid kits (one in classroom and one on range).

Since a range and simulator type driver education program requires team teaching, the range facility would be available for physical education one semester during the school year.

Committee:

Tom Love

EDUCATIONAL SPECIFICATIONS FOR ENGLISH

Philosophy and Objectives

1. We believe that our primary obligation as teachers is to understand and know our students as human beings.

2. We believe that all students possess some characteristics which are common to any level of development.

3. We believe that the language arts program should assist each student to fulfill his potential - physically, emotionally, mentally, socially, morally, and spiritually. This is capable of achievement through interpretations and evaluations of thematic expressions in literature and other forms of the language arts.

4. We believe that the language arts as a constantly growing and changing medium, should be taught as universal tools of communication. (Effective reading, writing, speaking, and listening are basic to earning a living, to academic success, and to enriching one's personal life -- socially, culturally, and intellectually.)

5. We believe that the curriculum should not be rigidly based upon a given set of textbooks, but upon the needs and individual differences of both students and teachers.

6. We believe that teachers should instill within students the desire to continue the habit of self-evaluation and self-instruction, whereby they may become mature persons who are capable in the arts of inquiry, problem-solving, and reflection.

The following general goals or objectives as listed in the Accreditation Standards for Florida Schools (1963) have been adopted by Alachua County English Teachers:

a. To develop ease, accuracy, and fluency in speaking
b. To grow in ability to listen attentively and critically
c. To grow in reading ability and selectivity
d. To appreciate language as man's unique means of communication
e. To develop a sense of responsibility for using the English language correctly
f. To extend understandings and emotional awareness through contact with high-quality literature as it has been written, recorded, and filmed in the past and present
g. To write legibly and spell correctly
h. To write clearly, concisely, and accurately
i. To use reference sources effectively

Specific Goals or Objectives

The Department of English, in its Curriculum Guides, has designed objectives on three tracks: for essentials, average, and accelerated students. All three tracks, however, recognize the importance of preparing students to meet occupational needs, to understand changing social forces and the fundamental values of American democracy, to use effectively their leisure time, to acknowledge social responsibilities, and to respect individual differences.

Despite fundamental and common precepts on all three tracks, an individual listing is necessary for a valid and true perspective of our objectives.

For Essentials Students:

To help the student find his own difficulties and to assist him to correct them

To help the student recognize that this course can help him as a more valuable citizen for himself and for society

To further the student's knowledge of the library and to increase his use of it

To aid the student in the development of correct and more effective oral and written expression

To improve the skill of reading for information and enjoyment

To encourage moral and spiritual values through the study and interpretation of literature

To encourage a degree of creative expression while extending practice in applying principles learned through brief written compositions

To foster creativity and application of concepts learned through social speech activities

To promote habitually correct grammar usage, punctuation, capitalization, and spelling

To review letter writing, both social and business

To develop appreciation for clear and colorful expression through word-study and vocabulary-building activities

For Average Students:

To teach writing, stressing the sentence and development of the paragraph

To interest the student in reading for enjoyment and self-improvement

To teach spelling

To review and strengthen the fundamentals of grammatical skills

To teach an appreciation of the power and the beauty of the written and spoken word

To teach an understanding of the growth and character development of America and England through the study of literature

To familiarize the student with representative writers who make up the English and American literary heritage

To provide for adequate use of library materials for reading, reporting, research, and writing

To place emphasis upon effective composition, both of a research and of a creative nature

To provide ample opportunity for listening and recording ideas

To emphasize the use of correct and effective language

For Accelerated Students:

The objectives include those specified for the average student, with the addition of the following goals:

To center the study of the course around human values

To polish the student's skills in self-expression

To enlarge the student's literary horizon and stimulate his mental growth by encouraging wide reading

To familiarize the student with modern, world, and classical literature

To motivate depth in literary interpretation, discrimination in literary taste, and creative value judgments of literary themes and characters

Educational Specifications - English

I. Philosophy and Objectives (copy attached)

II. Course Content and Activities (Language Arts Curriculum Guide)

III. Traffic Pattern

As all aspects of traffic in relation to the school affect all teachers and all departments, the English department wishes to speak of several points:

A. The location of the school must be such that a traffic pattern can be easily established on all approaches to the school plant by the city or county police, traffic division.

The noise of a main highway or airfield should be at a distance.

B. Traffic patterns for flow of students on the school grounds must be carefully studied and prepared so as to prevent congested areas, walk-ways, and entrances.

C. Traffic patterns in the building itself must be carefully studied so as to prevent congested spots and dangerous obstructions.

IV. School Plant

Many pages of notes can be written about the plant itself, but the English department is making a few suggestions:

A. A circular pattern should be used with the library as the hub of the wheel.

B. Various departments should be placed as the spokes of the wheel.

C. The plan for the building of department wings should prevent doors from being located opposite other doors.

D. All doors should be offset and recessed so as not to open into flow of traffic.

E. Each door should have a small pane of glass near top.

F. All doors should open out.

V. English Department

The location of the English department wing (or wings) is very important. All areas of English should be located as near as possible to the library. All areas of English should connect with or be as near as possible to the large group instruction room, and this room must be located so that it will be easily accessible to the public. The audio-visual room must be located so that equipment can be easily moved to all areas of the English department.

A. Classrooms

1. Classrooms need to be large enough for, at least, thirty students six periods per day with space enough for movement.

2. Although air-conditioned, classrooms should have windows and shutters for darkening rooms.

3. Rooms should be shaped to provide flexibility of seating arrangements of students.

4. All rooms should have air-conditioning and silent heating. It is very important that rooms be quiet.

5. Rooms should have all of the bulletin boards, scratchless blackboards, magazine shelves, and bookcases possible. All wall space should be used for these purposes.

6. Every room should have acoustically treated flooring.

7. Several classrooms should have a small portable stage.

8. There should be a teachers' planning and work room. See Part IV, Social Studies, for detailed description of this area. Omit section B, 9 re map storage.

9. Each classroom should be equipped with, at least, six electrical outlets, proportionately spaced, of sufficient voltage to carry audio-visual aids, including conduits for television sets for future teaching by closed circuit television.

10. There should be a built in projection screen in each classroom. It should be possible to darken each window in a room.

B. Library

The library is a most important part of the English program.

1. The library should be easily accessible to English classrooms to facilitate movement of students from one building to another.

2. The English department recommends that there be one library classroom large enough for scheduled library work.

C. Extra rooms for English

In addition to regular classrooms and joint use of a large group instruction room, there are several more rooms needed to complete the English department:

1. There should be speech rooms. (See section on Speech and Drama)

2. There should be a journalism room and a dark room. An area for publication is necessary.

VI. Extra Notes

A. Mimeograph machine should be in all-purpose work room.

B. No carrells should be installed in English classrooms except in a remedial reading room.

C. An effective intercommunication system should connect the entire school.

D. Schoolrooms should be located away from outside noise or distractions.

E. No outside teaching area _as such_ should be planned.

F. Preparation for teaching by television and "to-be-developed" aids should be made.

G. Sliding shelves for storing pictures and prints should be provided in the teachers' workroom.

H. Adequate lighting for day and night use in all buildings should be provided.

I. A locker large enough for books and coats should be provided for each student. (No specifications for lockers are included in this document, but will be written as a supplement when this volume is revised at a later date.)

Committee:

Louise Echols
Andasia Bennett
Lillian Pirenian
Nathaniel Clark
Rosemary Koger
John H. Hill
Virginia Whiddon
Mary Sharp
Mary Lewis

EDUCATIONAL SPECIFICATIONS FOR EXCEPTIONAL CHILD PROGRAM

Philosophy

Accept each child as he is -- where he is -- and proceed to open doors of opportunity for him.

Objectives

General

To help children with varying exceptionalities to develop personal adequacy, social competency, economic self sufficiency and civic responsibility.

Specific

To provide an atmosphere that will stimulate the natural interest which the pupil has in the world around him.

To assist in his social development so that he will get along well with other people.

To encourage the child to learn to plan activities, accept responsibility for his acts, share with others, make and obey rules and care for his own property.

To teach him the proper use of materials and provide opportunities for him to acquire dexterity in their use.

To provide experiences that will stimulate the child to develop fully at his own stage of growth and lay a foundation for the years ahead.

Identification

The children in the Exceptional Child Education classes are those who have been identified in accordance with Florida Statute #236.61 as those needing a special instructional program. The following classifications are used: Mental Retardation (Educable), Mental Retardation (Trainable), Physically Handicapped, Severe Learning Difficulties, Blind and Partially Seeing, Deaf and Hard of Hearing. Not every school will provide space for each of these exceptionalities, however, it is necessary to provide specifications in this report to cover the total area. Certain schools may have classroom for only one area of exceptionality.

Requirements

Each of these special problem areas need standard size classrooms, 900 sq. ft., meeting all lighting, heating, cooling, ventilation and acoustic standards and such alterations necessary to meet unique curriculum needs to be discussed. Facilities should be arranged so that pupils are an integral part of the regular school program even though their instruction is separate.

Mentally Retarded

Educable and Trainable -
Florida Accreditation Standards #130-5.96 indicate that facilities must be available for use in developing skills in curriculum which includes communication, body care, clothing maintenance and repair, food preparation, home maintenance and non-occupational activities as these skills are ones identified as essential for managing oneself in society.

Special Considerations

The atmosphere of the classroom must be one of mobility for grouping and regrouping to meet learning needs of the children.

Sinks, cupboards and bookcases need to have rounded corners, void of sharp edges as these children tend to fall a great deal.

Many centers of activities are necessary to implement the curriculum as these youngsters learn by involvement, thus require stimulation and reinforcement.

The organization of the room must allow for several activities to run concurrently as often as necessary.

Each teaching area needs to be provided with duplex grounded electrical outlets (2 on each wall) with safety covers.

Needs

Provision should be made for storage of Audio-Visual equipment and aids, materials and small teaching equipment. A minimum of 25 square feet of storage space per classroom is recommended.

Provision should be made for darkening room for Audio-Visual use.

Utilization of some portable book cases and cabinets as screens should be considered.

Furniture, floor and walls should be mar resistant. The floor should be nonskid, easily cleaned.

Additional chalkboard, and display surfaces are necessary.

Double sink with work space adjacent is necessary. Stove and refrigerator is desirable, also work bench with tool cabinet.

Paint color should be warm, pleasing and restful to the eye.

Corner booth, 6' x 8' for quiet area for easily distractible children. This should have a plexiglass window so teacher can observe child.

Additional Needs for Trainable Mentally Retarded

Entrances should be near the bus stop and parking area. Adjacent to and as part of the classroom, a fenced, grassed and planted area, approximately the same size as the classroom, is needed for exercise and nature study.

Physically Handicapped

In providing for the education of the physically handicapped, consideration needs to be made not only to the classroom and its functional use, but also to the school building in which the class is located. Architectural barriers need to be eliminated. There should be a ground level ramp and class located near exit for easy loading and unloading of children. Access to school structures and outdoor activities must be considered for those youngsters in wheel chairs, walkers and crutches. Sinks, drinking fountain, counters, toilet, faucets, and light switches need alteration to accomodate them. The individual class space must consider functional and manipulative problems of the youngsters. Detailed specifications must be planned with architects when types of rooms for new buildings are agreed upon.

Special Considerations

The room must provide for freedom of movement because of the comprehensive problems of the youngsters and the wide range of ages. The organization of the room must provide for flexible use for varying centers of activities.

Only 900 sq. ft. is stated in present planning as approved by the Board.

Needs

Counters, sinks, light switches, shelves need to be easily attainable.

Floors should be non-skid. Steel plates on bottom panel of doors are necessary.

Blind and Partially Seeing

The challenge is to attempt to bring into focus for the blind and partially seeing, many of the educational experiences which for sighted children are learned chiefly through visual observation. This necessitates bringing into eye range, for the child with limited vision and within arms reach for the child who is blind, the objects and situations in his immediate environment.

Special Considerations

Both artificial and natural lighting should be planned so as to have a minimum amount of glare.

Chalkboards should be either gray-green or blue-green rather than black.

Movable desks with adjustable tops for ease and comfort in seeing work materials are very desirable.

A walk-in storage space for volumes of Braille and other large type books and equipment is most desirable. Braille books are heavier and of a larger size (at least twice the size of ordinary books). Shelves must accomodate these differences.

Needs

At least two duplex electrical outlets for every wall, spaced about 3 feet apart for using tape recorders and record players.

Hard of Hearing and Deaf

In planning a developmental curriculum based upon the needs of children with impaired hearing that will enable them to operate more effectively in their own environment, the school must keep as its goal the guidelines used in all public schools, but must modify them to meet the needs of the deaf and hard of hearing.

Special Considerations

Classrooms should be placed in portions of the building away from street noises whenever possible.

The use of heavy drapes is recommended to absorb bouncing sounds.

So that extraneous noise will be reduced to a minimum, the room should be acoustically treated, but not necessarily sound proofed.

Since deaf children acquire much of their learning through the eye, it is essential that the classroom be well lighted. Lip reading particularly requires that the faces of speakers be well illuminated.

Electrical outlets should be placed 3 to 4 feet apart along the chalkboard so that pupils may use their earphones when working at the board.

Needs

Electrical outlets should be placed at about the rate of every 6 feet of wall space for use of group hearing aid equipment with earphones and microphones for each child's use.

Committee:

Lucy Beckum
Gladys Alexander
Earl Howell

EDUCATIONAL SPECIFICATIONS FOR FOREIGN LANGUAGES

Philosophy

1. Spanish - In the teaching of Spanish the goal is not to enable the student to think in the foreign language as a native does but to help him learn how a foreign student thinks. Efforts are made to develop favorable attitudes toward peoples in other countries through an understanding of their life, language, and culture.

2. French - The study of French is "both a progressive experience and a progressive acquisition of a skill," and learning derived from both or either results in a cultural experience of lasting value. At no point can the study be considered complete or the skill perfected.

3. Latin - Through the study of Latin a student can improve his English vocabulary, enlarge his knowledge of classical mythology, social customs and life, acquire an ability to translate Latin, and develop an appreciation of the Roman genius for military, legal, literary, engineering, and architectural accomplishments.

Objectives

1. Spanish - skills that the students are to develop: listening, understanding, speaking, reading for comprehension. We stress the appreciation of the culture, history and geography of the people whose language is studied.

2. French - the acquisition of the skill can become mastery only after years of practice. In the high school we do not hope to acquire the skill of a native speaker. Our aim is to:

   a. Increase the ability to understand the spoken language;
   b. Increase the ability to speak it in direct communication
   c. Read it with increasingly and greater ease and enjoyment
   d. Write the language

   With this acquisition comes an understanding and knowledge in varied degree of a culture other than ours.

3. Latin

   a. To learn to read, write, and understand the Latin language, both for information and enjoyment.
   b. To improve knowledge of the English language by studying its major source. Through Latin a student may improve his vocabulary, learn the exact meanings of English words of Latin

derivation, and appreciate many of our English spellings. Recognition and repetition of sounds in pronunciation can lead to improvement in reading. Practice in translation may help a student speak and write more effective English.

c. To build a solid foundation for later study of the modern foreign languages, especially of the Romance languages.
d. To develop mental habits of careful study, accuracy, and perseverance.
e. To broaden horizons through the understanding and appreciation of an ancient civlization and culture, especially one from which the modern western world has inherited so much.

Course Offerings: Four years of Latin, French, and Spanish (800 to 2000 Gainesville High Students study a foreign language)

Facilities

In addition to six regular classrooms (based on the idea of 25 to a class, and of using these classrooms all periods daily), it is necessary to have one or more language laboratories where work is scheduled by classes. These classrooms and the laboratories may also be used for classes of Speech, Business Education or English if enrollment is not as we expect. If the school is in a neighborhood that is underprivileged, these rooms could be used to good advantage in speech training as well as in listening to enrichment lectures or music.

Laboratory for Languages

Each laboratory should have 45 stations for 42 students (allowing for three non-functioning units) to permit the talking-listening skills to be learned with the assistance of microphones for each student and six tape recorders, each having at least three channels for different programs, to be used for one class. It is recommended that there be practice booths for the use of students who need to make up work or have more practice. In any adequate laboratory, recording the voice and hearing it played back is very important. Manufacturers must furnish spare units for warehouse so that equipment stays operative.

Students will sit at tables, divided from one another by partitions to block view and noise from adjoining booths. The table should have a movable sliding top which can store the electronic apparatus when it is not in use. This compartment should be some four inches deep so that the gear is not crowded. Floor covering in the lab would control noise. For this acoustical floor treatment, we recommend a continuous filament nylon, not rubberized vinyl. Special acoustical ceilings and walls and air conditioning help control the noise of a laboratory.

Storage for students' books, which they always carry to class, must be provided, either in a compartment under the stool or under the student carrel at the tables.

There should be a raised platform at the front of the room for the teacher and the console she needs to control all the student stations, using the individual tape recorders and earphones.

When there are two language laboratories, they should be adjoining each other and have the type of folding or sliding wall which may be moved quickly and easily to permit both classes to engage in the same activity at the same time, or to accommodate classes larger than the projected class. We recommend a partition that can be lowered from the ceiling and that will be up at the ceiling and out of the way when not being used. (See the diagram of Nova School.)

Adequate sliding blackboard space should be provided (maybe 10 feet long and 38 inches high) or an overhead blackboard which can be moved like overhead garage doors.

Air conditioning helps control noise and is also a necessity for maintaining the equipment of a language laboratory.

We recommend sufficient electrical outlets on each wall to accommodate electronic equipment for 45 students and one in the center. Conduits for closed-circuit television should be included.

We are interested in doing the most we can for the improvement of our students through following the new trends in television and in team-teaching.

Adjustable locked bookshelves in the laboratory are necessary for storage of tapes, records, tests in assorted vertical and horizontal slots, and books.

Regular Classrooms

There should be provisions for the use of a projector from the teacher's desk with a screen on the opposite wall and proper facilities for darkening the room to use AV materials. No skylights should be used. A permanent overhead projector should be installed in each classroom.

There should be two electrical outlets for each wall.

The regular classrooms should have storage space for club projects and a student workroom for committee work and project work involving six or seven students at a time.

One filing cabinet of at least four drawers that can be locked should be furnished for each teacher.

Adjustable bookshelves are needed along one side of room, 3 ft. high. There should be locked bookshelves also; sliding doors on part of them.

Built-in tape recorder in each room. A record player is also recommended for each room.

Bulletin boards with sliding blackboards to cover them when needed. 2½ sides of the room for blackboards, ½ side for bulletin boards, and 1 side for windows. (If windows are not used provide 3' high bookshelves and blackboards above).

8 inch raised platform for teacher's desk.

Committee:

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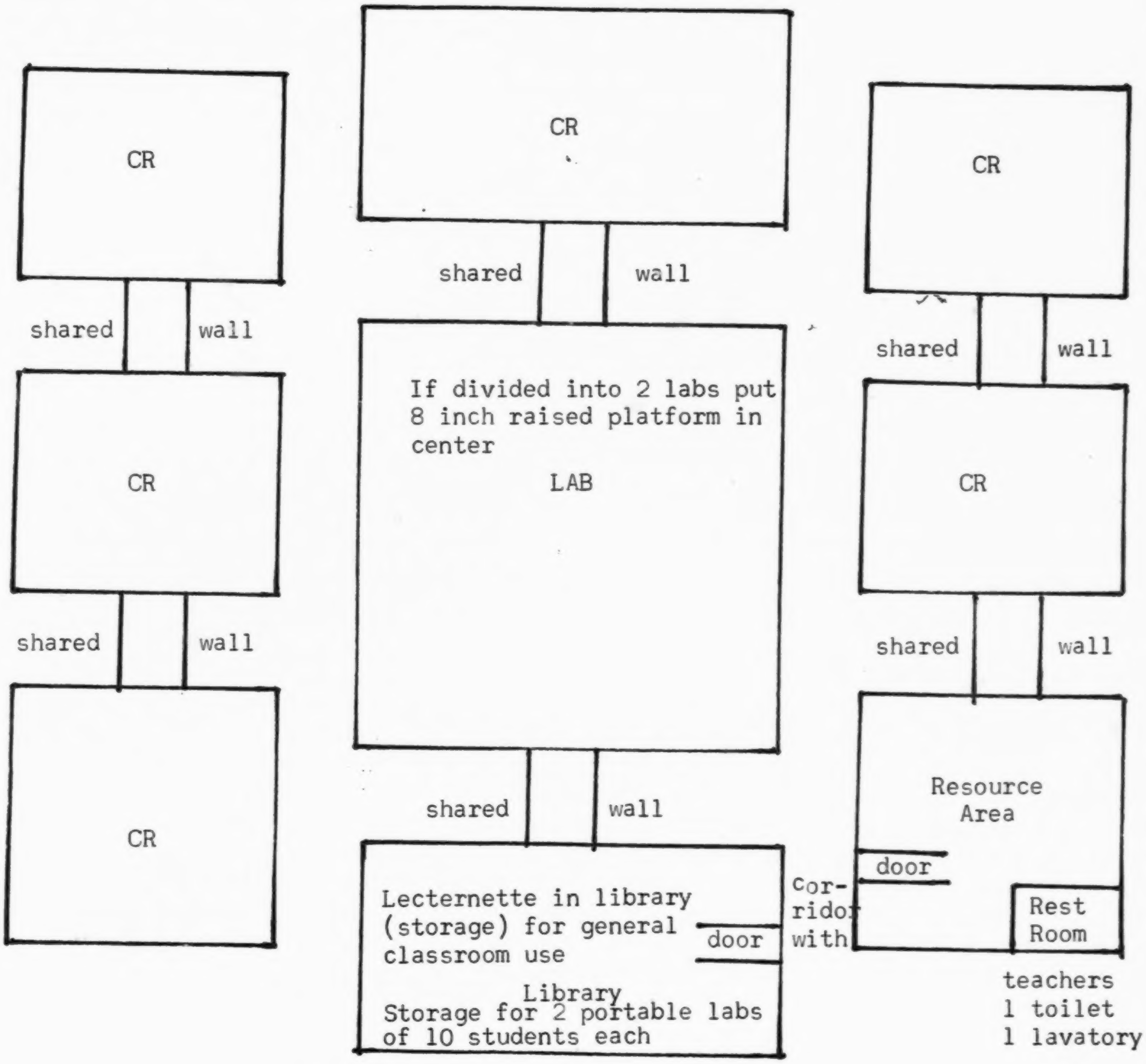
Geraldine Hodges
Lois Richardson
Virginia Bartlett
Marguerite Rhea
Vera Jenkins
Jean Brown
Bloom Meyer

See this booklet for detailed electronic diagrams: Hayes, Alfred S., Language Laboratory Facilities, New Media for Instruction, OE 21204, Bulletin 1963, No. 37, U.S. Department of Health, Education and Welfare Office of Education, Washington, D.C.

All these rooms share a soundproofed wall: eliminate corridors as far as possible.


CR
CR
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wall
CR
shared
wall
CR
shared
wall
LAB
CR
shared
wall
CR
shared
wall
Resource Area
door
Rest Room
door
Corridor with
Library

If divided into 2 labs put 8 inch raised platform in center

Lecternette in library (storage) for general classroom use

Storage for 2 portable labs of 10 students each

teachers
1 toilet
1 lavatory

Moving walls (soundproof) to combine classes recommended

EDUCATIONAL SPECIFICATIONS FOR HOME ECONOMICS DEPARTMENT

Philosophy

The Home Economics staff recognizes that the primary function of the department is to offer students the opportunity to develop a better understanding of their own physical, emotional and mental growth; a better understanding of other people; to intensify their activities and perfect their skills in areas of homemaking; enlarge their social areas; to motivate their thinking for making better decisions in choice of values and goals; to appreciate the satisfaction of self-fulfillment that comes with self improvement and self giving; and to appreciate beauty in all phases of homemaking.

Objectives of the Home Economics Program

1. Vital experiences in all areas of home economics should be included in the program.

2. Current research and studies which relate to the changing needs of society affecting home and family should be a basic for the program.

3. An appreciation of home economics as a profession which requires careful preparation and continued study.

4. A recognition of the importance of providing a home environment in which all members of the family will have an opportunity for optional development.

5. Ability to use to the best advantage human resources such as time, energy, health, attitude, appreciation and understanding.

6. Ability to select and use material resources to the best advantage concerning cost efficiency, desirability, aesthetic value and ease of care.

7. A recognition of problems affecting the family and a willingness to participate in an action program which has as its goal some solution to these problems.

8. Ability to use effective methods and procedures leading to the development of manipulative, social, managerial, and creative skills in home and family living.

9. An appreciation of beauty and some ability to create an attractive and pleasing environment.

10. An appreciation of the joys and satisfactions of homemaking.

Description of Course Offerings

1. Food and Nutrition
    - A. Comprehensive - 10th grade girls
    - B. Foods and Nutrition - 10th, 11th, 12th grade girls and boys - prerequisite to Advanced Foods
    - C. Advanced Foods and Nutrition - 10th, 11th, 12th grade boys and girls
2. Housing and Home Furnishings
    - A. Comprehensive - 10th grade girls
    - B. Housing and Home Furnishings - 10th, 11th, 12th grade girls
3. Child Development
    - A. Child Development - 10th, 11th, 12th grade boys and girls
4. Textiles and Clothing
    - A. Comprehensive
    - B. Textiles and Clothing I - prerequisite to Advanced Clothing Construction
    - C. Advanced Clothing Construction
5. Management and Family Finance
    - A. Comprehensive
    - B. Management and Family Finance - 10th, 11th, 12th grade boys and girls
6. Personal, Family and Social Relations
    - A. Comprehensive
7. Modern Family Living
    - A. Open only to 12th grade boys and girls

Activities Included in Home Economics Program

1. Food and Nutrition

   This area includes the study of nutrition, planning and preparation of family meals, preservation of foods, methods and practice in proper entertaining. Instruction includes use of films and film strips, overhead projector, many visual aids. Space is needed for classroom atmosphere for nutrition instruction and planning. Light and climate control are essential for use of audio-visual aids. This class should be limited to not more than 24 students.

2. Housing and Home Furnishings

   Study of housing and changing patterns of living, style of homes, costs, etc; do-it-yourself repair; selection and arrangement of furnishings, beautification of interior and exterior of home. Class activities include use of many materials such as carpeting, bedding, building materials and models - both to be made and used for teaching. Space is needed for work and storage of bulky teaching aids. Films and other audio-visual aids are used.

3. Child Development

   The Child Development course uses group discussion, movies, and film strips, resource people for demonstrations and lectures. The course includes growth and development of the child and family life influences. Provision for observation of children is needed.

4. Textiles and Clothing

   This unit includes study of textiles, their use and care; sewing instruction skills, altering of patterns and clothing; care of equipment, selection of ready-made garments and accessories; personal grooming; laundry and cleaning of garments. Textiles, looms, consumer education aids, testing materials need storage in addition to individual work and the usual tools: dress forms, a three-way mirror is needed, adequate private dressing space for fitting must be provided. Audio-visual aids are used in teaching subject matter.

5. Modern Family Living

   This is a study of the family, its goals and values, problems facing families of today and tomorrow. - Basically this is a course using movies, film strips, resource people for demonstrations and lectures.

6. Home Management and Family Finance

   Home management is a study of saving time, energy and money. This is applied to varied situations and the students are taught to logically approach the activity in the best way. Students need to apply these principles so working centers are needed. Family Finance is a study of wise use of family income for the present and planning for the future.

General Considerations

It is recommended that a conventional classroom with chair desks be provided in the home economics department. Such a room must have lock on door, as must all outside doors in home economics rooms. Locks should be provided for storage areas. This classroom should have a flexible dividing wall so it could be used by two teachers simultaneously.

The home economics room should have a service entrance available to facilitate getting needed supplies with the least effort.

All areas should be climate controlled and well-lighted. Floors in the laboratory area should be of materials for easy care, with all other floor areas covered by acoustical material. All areas should be well screened. Exhaust fans should be provided in the food laboratory. Adequate chalkboard space, bulletin board space and visual and audio equipment is needed in each area. Walls in the kitchen laboratory should be easily cleaned. Storage space near entry for students to store coats, books, etc. from other classes. Sufficient electric outlets in all areas. Cheerful colors and home-like decor are desirable.

Multi-purpose Room

An 8' x 6' separate locked room for teacher office use with rack and shelf or shelves for coats, purses, umbrellas, personal books, typewriter and typewriter desk, 2 chairs

Homelike area for conferences with individual students

Space for FHA file, FHA bulletin board, FHA table for work or display, 2 locked file cases for teacher use

Storage for free instructional material - shallow enclosed shelves

Storage for dress forms, looms

Bulletin board supplies (such as tempera, brushes, poster-board)

Storage for flower arrangement materials and table to work

Storage of table linens, china and silver (demonstration), punch bowls, center piece, arrangements, etc. Shelves for recipe books

Laundry Area

Available to sewing and foods area with space for washer, dryer, laundry sink. Storage for laundry supplies with area for teaching stain removal, and other laundering techniques

Child Development Area

Classroom areas for group lectures, films, other visual aids

Area where students can observe small children at work and play

Housing and Home Furnishings

Classroom area - flat tables, chairs for group discussion and instruction

Storage space for visual aids - Lighting teaching aids - Household fabrics

Home Beautification - Paint brushes, paper, rulers, furniture and room models

Outdoor area - area available with storage space for equipment and water for area and for cleaning up - utility or mud room with outside entrance for weekend or after school availability

Modern Family Living

Classroom for group lectures, (furnished with chair desks) areas for small discussion groups, space for magazines and reference materials, space for individual study, work and research, one demonstration kitchen

Home Management and Family Finance

Area for large group instruction, individual study and small group discussion

Area for display and storage of teaching aids

Access to kitchen for practicing time and energy experiments

Food and Nutrition Area

Area for class instruction but so students can move quickly and easily to small group work (must have adequate space)

Instructors desk and chair

Storage for students books, purses, etc. (at entrance)

Storage of textbooks, booklets, reference books, cook books, etc.

*Six kitchens - double sink, stove, cabinet and work space, dinette and chairs, includes demonstration kitchen

Additional storage for small appliances and special cooking equipment

Space for general supply storage

Area to place foods for laboratory class so that supplies are easily available to each kitchen

Shelves and drawers for bulletin board and other exhibits

Storage for film strip projector and film strips, records and record player

Large shelves and drawers for teaching materials

Adequate lighting at each cooking center

Space in area for drying towels and cloths

Cleaning storage (to be accessible to all areas)

Storage area for brooms, sweepers, mops and general supplies to be used by all areas of instruction

Space for at least two large refrigerators and a freezer

Demonstration Kitchen

Equipped with sink, stove and refrigerator, work space and cabinet space, demonstration mirror

Placed where all students can see

This kitchen might be equipped with movable facilities except for sink so that different kitchen arrangements may be studied for time and energy requirements

Sewing Area

Space for group lectures and individual study

Space for adequate use of films and film strips

Cutting table space (easily moved) for 12 - 15 girls

Space for sewing machines (12-15)

*Portable kitchens are recommended for additional groups to add flexibility to the program and conserve space.

Area (6' x 8', well lighted and ventilated) for changing clothes and for fitting garments should have portable three-way mirror

Demonstration area- preferably raised 8 inches with instructor's table

Closet space for garments under construction

Locked storage for 25 sets of individual sewing cupplies and materials,

Display area for pattern books

Class enclosed area for display of accessories and projects, entered from classroom side; not accessible from outside - no display areas with glass because of vandalism

Storage space (drawers) for small sewing supplies

Area for displaying ready made garments

Enclosed area with adjustable large shelves for supplies and equipment for instructional and student charts used only in this area of work

Ironing space - two units to use at one time, space for storage of ironing equipment near ironing unit

Dining Area

For teaching

Special entertainment

Dining room table and chairs for 6 - 8 people

Committee:

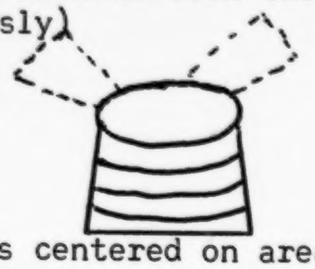
Forrest Hillyard
Ruth Stearns
Catherine Mullin
Elizabeth Martin
Marian Burgess
Sandra Turner

EDUCATIONAL SPECIFICATIONS FOR LARGE GROUP INSTRUCTION ROOM

Uses of Large Group Instructional Area

1. Lectures
2. Demonstration, science and others
3. A-V
4. Performing arts - small drama production, musical program recorded and live
5. TV material projected

Size, Number, Shape

1. 3 facilities are needed (one room, divided by folding doors, with central screen, demonstration table and lectern. All 3 areas may work simultaneously)
2. Shape should be  trapezoids so focal point is centered on area where lecture, demonstration, etc. is conducted.
3. Fixed furniture, long curved tables should be on the elevated, riser type floor.

Equipment

1. Large (5 x 7 or larger) built in electrically operated screen.
2. 2 smaller screens, 1 on either side of larger one for use with over-head projectors when large screen is in use so fixed material can be used at same time
3. Sound system should meet high fidelity specification (20-20,000 + CPS) so music may be reproduced accurately. System should be stereo for realism with humanities and other material.
4. Acoustically treated floor
5. Large porta-lab (with AC, DC outlets provided in floor)
6. Lighting control by dimmer switch
7. Portable chalk board
8. Portable bulletin board
9. Adequate storage for equipment
10. Movable lectern

Subject Areas Represented in Report

1. English
2. Science
3. Social Studies

Committee:

Joe Lowe
John Perdue
Joe Rivers
John Neller
Mary Elliott

EDUCATIONAL SPECIFICATIONS FOR MATERIALS CENTER (LIBRARY)

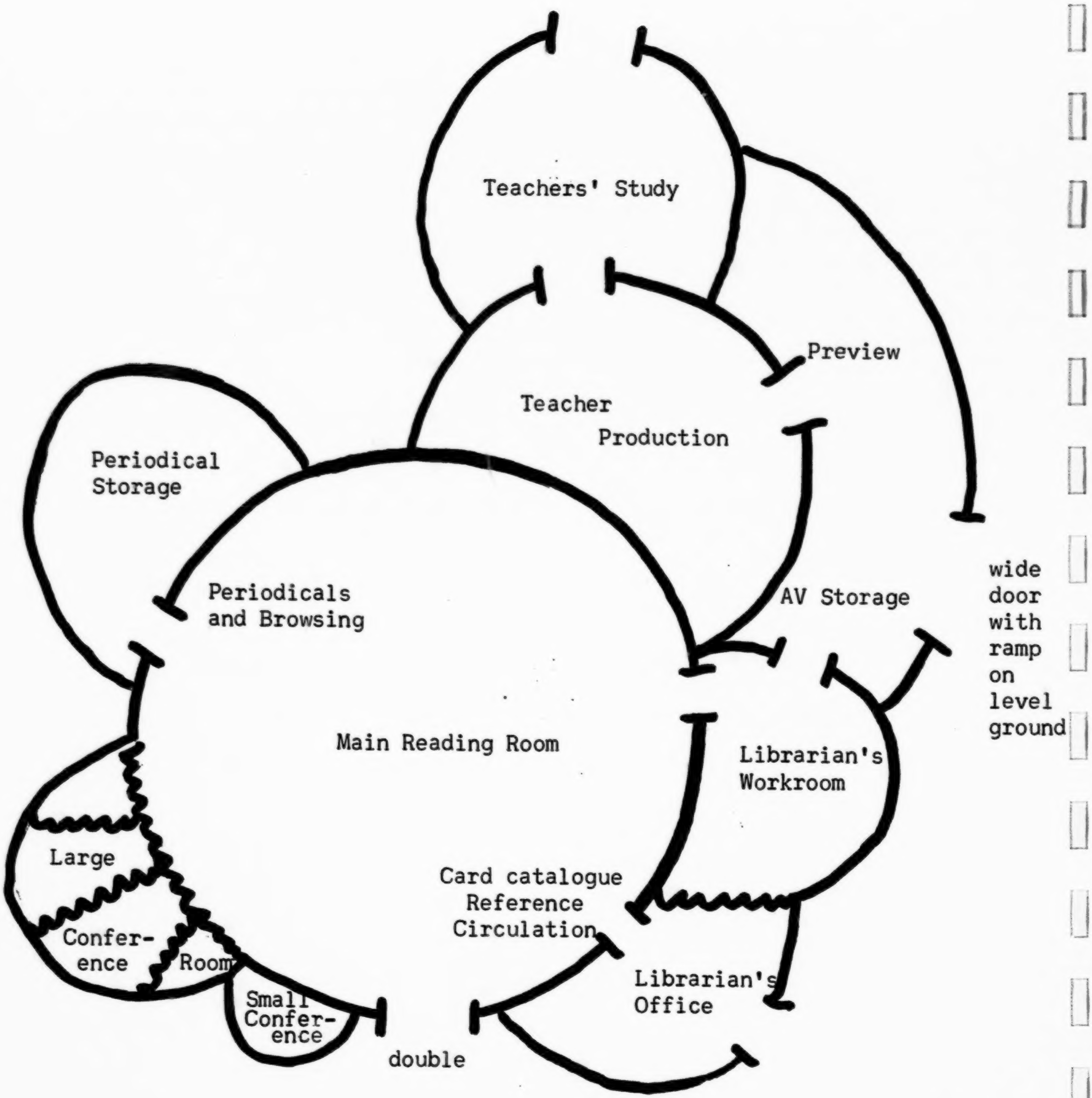
The school library (learning center) for the Alachua County Schools is a center for learning for the entire school, both students and staff. It is a place where pupils and teachers can go to find a multiplicity of well organized materials which will aid in whatever learning is in progress. The emphasis is on the individual and the learning situation rather than on the materials. The library must provide instructional media of all types, both printed and non-printed, and workroom space to facilitate the use of the media. This space must include production area for teachers to continue to improve their skills, and to provide quality materials in adequate quantities to stimulate the student to want to learn and grow to the fullest extent of his capabilities. Included in the library should be adequate areas for quiet reading, for exploring, for group instruction, for reference work, for listening to recordings, (both tape and disc), for viewing all kinds of projected materials, and for preparation of the various materials by the pupil, the teacher, and the librarian.

Junior High School or Junior-Senior High Combination

Should be constructed as specified for Senior High School except:

1. With only one conference room to seat 30 pupils, with sliding partitions to make smaller areas
2. Main reading area adjusted downward to seat 10% of ultimate enrollment
3. Shelving for minimum of 10 books per pupil
4. Circulation desk 10' or 12'
5. Office Space for 2 librarians

Learning Center
(Secondary School - 1600, Junior High - 1200)


Teachers' Study
Preview
Teacher Production
Periodical Storage
Periodicals and Browsing
AV Storage
wide door with ramp on level ground
Main Reading Room
Librarian's Workroom
Large Conference Room
Card catalogue Reference Circulation
Librarian's Office
Small Conference
double

EDUCATIONAL SPECIFICATIONS FOR
SECONDARY MATERIALS CENTER - 1600 PUPILS

I. Special Considerations

A. Space and flexibility are to be desired above all else.

B. Provision should be made for the building expansion due to the expanding concept of the materials center, especially important if minimum standards are used in basic construction.

C. Direct sunlight is to be avoided as it is harmful to bindings, a problem for reading, and would require supplementary light control.

D. Artificial lighting should be so placed that the letters, numbers and titles on books on shelves are visible without eyestrain.

E. Night operation of the library will require outside illumination .

F. Temperature and humidity control must be provided to preserve book bindings and acetate projectables to prevent mildew, mold, and expansion and contraction of acetate materials.

G. Telephone is needed.

H. Acoustical floor coverings, ceilings, and walls (above shelving) to reduce noise, lower maintenance.

I. Intercommunication system should not be in main reading room, but in librarians' office. It is a distraction to the serious student.

J. Running water should be provided in all work areas.

K. Plexiglass in upper panel of all doors, so that students will not be injured by opening doors.

L. One main entrance, with fire exits from other rooms as needed. (A.V. equipment storage rooms, librarian's office and teachers' study.

M. Minimum of two bulletin boards at least 3' x 5', preferably 4' x 6'. Additional ones are desired.

II. Location

A. The library is the center for learning in today's instructional philosophy, and it should be as centrally located as possible for proper availability of materials. However, it should not be in the vicinity of the band rooms, shops, gymnasium or student toilets. It is desirable that the teachers' study, and textbook storage be adjacent to the library, if not a part of the complex.

B. The library should be on the gound floor of a multi-story building. A balcony could be constructed within the library to be used for the professional library, teacher preparation areas (if separate from that used by pupils), conference rooms, and storage of infrequently used materials. If a balcony is provided, a dumbwaiter would be required.

C. If classrooms are located above a library, ceiling must be soundproof.

III. Main Reading Room(s)

A. Main reading room(s) plus conference rooms should seat a minimum of 10% of the enrollment, or 160 students, allowing 30 - 35 sq. ft. floor space per pupil. 4800 (net) sq. ft. for Junior High; 7000 (net) sq. ft. for Senior High.

B. ALA specifications state that not more than 80 students be seated in one area - highly desirable that no more than 40 in one area. One solution to this is to construct 40" high movable book shelves (6' long, shelves on both sides, 8" deep) to be used as dividers for the areas.

C. Book Shelving

1. All shelving in the library should be adjustable.

2. Shelving should be provided for a minimum of 16000 books, allowing 8 books per running foot with a depth of 8". Book shelving in reference areas should be 10" deep, allowing 6 books per running foot.

3. Wall shelving in sections 7' high and 3' wide.

D. Periodical Shelving and Display

1. Space should be provided for 30 - 50 current periodicals. This periodical display space should be of the sloping type, with a retainer bar or rail low enough to permit the titles to be read.

2. Newspapers - Space for 6 - 8 current daily newspapers.

3. Table top arrangement for Readers' Guide to Periodical Literature should be provided near periodical area. Periodical storage area must be provided adjacent to periodicals area. (See IV)

4. A browsing area should be provided in the vicinity of the periodicals and newspapers.

E. Bulletin board - Visible to all students using library - size 4' x 6'.

F. Display case with a glass front, and lock for special exhibits 4' x 6' x 12", inside the room.

G. Card catalog space 18" x 100", plus room for a narrow table 18" - 20" wide and 6' long to put card catalog drawers on to permit several to use the catalog at the same time.

H. Space for atlases either on built-in oversize shelving, or an atlas stand(s).

I. Clock in main reading room, timed to school periods, with muffled gong.

J. Circulation Desk

1. U or L shape preferred
2. Recessed well (size 20' x 26' recessed 9") for circulation cards
3. Approximately 15' total length, 30" wide, 40" high
4. Located near librarians' office
5. This desk should be movable; not attached to floor.
6. One end should be fitted with a slot for return books, with a depressable book truck underneath the slot.
7. Two drawers in the circulation desk, size 2' x 2' x 3" deep, one fitted with a lock
8. Additional shelves under the desk, 10" high
9. Adjustable shelving behind the circulation desk on wall

K. Study Carrels

1. Study carrels should be located in the main reading room for individual work. It is desirable that there be individual study carrels for each student.
2. The minimum number of carrels in the main reading room should be 10, but more are highly desirable.

3. Each carrel will require approximately 4 sq. ft., not counting user's chair.

4. There should be adequate lighting and wet carrel equipment, conduits, etc. provided.

L. Acoustical floor covering, ceiling and walls is highly desirable in main reading room(s) and conference rooms. Terrazzo and cement is very noisy and to be avoided.

M. Vertical files - Space for 6 - 8 legal size vertical files (may be back to back). These will contain clippings, pamphlets on a number of areas, career bulletins, etc.

N. Electrical outlets should be provided in the main reading room at 15' intervals. These should be located in the baseboards, not behind books in the walls.

IV. Periodical Storage

A. Back issues of periodicals are used in reference work and must be kept available over a number of years, in correct order, and easily available.

B. Special shelving is needed for this type materials. It should be 12" deep and with adjustable shelves. These can be built to the ceiling, and made accessible by means of a good library ladder. One section of this to be 14" deep by 3' x 6' for oversized periodicals.

C. Bound volumes will also be kept in this area, along with 40 - 50 magazines indexed in the Readers' Guide.

D. The door to this room could be a half door, with a shelf, or counter top to enable student assistants, or clerks, to circulate and receive materials.

E. Microfilming, in the future, will keep this room from becoming overcrowded.

V. Librarians' Office

A. Florida Standards at Level III calls for 3 librarians for a school of 1600 pupils. Office space must be provided for 3 in the library office.

B. This area must be near the circulation desk, the card catalog, and the reference area.

C. A plexiglass area, starting 40" from floor, between this area and the main reading room, must be provided so that the librarians can be available quickly to aid students and teachers.

E. Space for:

   1. 2 or 3 chairs for conference and consultation in private with teachers or pupils.

   2. A typewriter table or area for typewriter under shelving.

   3. Adjustable, 12' long and 10" wide, shelving for librarian's professional books.

   4. A movable book truck, 3' long, 16" wide and 30" high.

   5. Vertical files (2) for book and AV selection tools, library records, requisitions, etc. - standard size, 4 drawer

VI. Librarians' Work Room - adjacent to librarian's office

A. Space for typewriter table and typewriter

B. Shelving for books being added, needing repair, being evaluated, (space for 1000 - 1500 books).

C. Long work counter, along one or more walls, with sink at one end. (Standard handwashing sink)

   1. Laminated plastic top with no metal edges

   2. Sunken area in this, if of sufficient length, to accommodate typewriter. Leave ample knee room.

   3. Shelf list, 18" x 33" to be placed on the counter top

   4. Cupboards for storage of glue, library cards, pockets and other such supplies, under the work top counter, with sliding doors.

   5. Shelves, 10" high or 12" high, 10" deep, over the counter top are needed; if some of the space has cupboards above, use sliding doors - corners hit heads.

   6. Allow as much counter top space as possible.

D. Glass partitioning between librarians' office and work room starting approximately 40" from floor, if separate rooms

E. Glass viewing area to main reading room

F. Vertical file(s) for book jackets. (2 four drawer, legal size)

G. Adding machine, stapler will be located here.

H. Provide electrical outlets at 4' intervals.

(Probably here, but somewhere, please, a 2' square area for librarians' and assistants coats, sweaters, purses, etc. Shelf for purses and rod for coat hangers.)

Note: V and VI could be combined - need not be separate rooms, separate areas. 600 sq. ft. minimum included in approved space.

VII. Production Areas for Teachers and Pupils - 600 sq. ft.

Counter space along one or more walls with laminated plastic top, no metal edges

1. Storage drawers underneath for bulky sheets of cardboard and drawing paper. (There is a commercial cardboard cabinet available in various sizes, fairly inexpensive, that could be used.)
2. Electrical outlets, at 4' intervals, over counters
3. Counter space in 3 wells sized for regular and bulletin typewriters and reproduction machines
4. Sink with hot and cold water, single, 6" to 8" deep, 22" square (approx. measure)
5. Counter space will be used for the production of transparencies, mock-ups, posters, dry mounting, duplicating and bulletin board displays.
6. A large table 4' x 6' x 35" high with laminated top for production work
7. Space for a drawing board, lettering devices, an opaque projector, a camera, camera stand, and photographic lighting for this area
8. If there is additional space available, a similar area could be provided for students' use in making displays of all types for reports, demonstrations, etc.
9. As much counter space as is possible. There is never enough.
10. Plexiglass viewing area to main reading room

VIII. Viewing and Previewing Area - 280 sq. ft.

A. Viewing area should be adjacent to production room. 1 light control with 2 way switch and dimmer on opposite walls.

B. This room should be acoustically treated.

C. This room could also be used for small conference and committees.

D. Mounted screens, 2 or 3

Note: VIII and IX must be adjacent)

IX. Equipment Storage Area - 500 sq. ft.

A. This room should have direct access to the outside, with no break in floor level to sidewalk, and a lock that will open from the inside only, and remain locked from the outside.

B. Provision should be made to house equipment on roll table recessed beneath built-in overhead cabinets (sliding or folding doors for small equipment). This would be equipment not permanently placed in the classrooms.

C. In this area would also be storage for models, films, filmstrips, transparencies, tape and disc recordings, single concept films, maps, charts, globes, and a bulletin board or other system for the charging out of these materials.

X. Photographic Darkroom

Level III Florida Standards. Should have space for trough and photographic sink, developing tanks, enlarger, paper cutter, and print drier. Minimum 80 sq. ft. (This might be used cooperatively with science, department of journalism, e.g. and might be located in one of these areas.

XI. Conference Rooms

A. 2 conference rooms (one to accommodate 30 pupils and one to seat 15 pupils), a part of main reading room, and separate from it by sliding acoustical partition

B. Larger conference room to be partitioned by acoustical partitions (sliding) to make 3 or 4 smaller conference areas for small groups

C. Light control for projectables

D. Acoustical floor, ceiling and walls

E. Study carrels in one, or both, of the conference rooms, located against wall(s) to be used for various learning situations, wired for electronically controlled instruction, electrical outlets, and typewriter space. The electric wiring to be placed in both conference rooms, even if carrels are not initially provided in both.

F. These rooms will be multi-purpose rooms in all respects.

XII. Teachers' Study and Professional Library

A. It is desirable that a teachers' study or lounge be provided adjacent to the library, if not a part of it. This will require additional square footage beyond a minimum, so it might be on a balcony in the library, or in the administrative suite.

B. Restroom needed, if this is not included or if not adjacent, for library personnel.

C. Professional library housed in teachers' study (wherever located), shelving for books 6' x 7' x 8", for periodicals, sloping shelves to accommodate 20 professional periodicals 6' x 7'. Space for a vertical file for catalogs of equipment and textbooks, pamphlets etc.

XIII. Textbook Storage Room, If This is not Provided in Each Department

Could also be in library complex and adjacent to teachers' study. Outside door should be provided.

Committee:

Helen Hoskins
Lucille Combs
Mary Greathouse
Tom McRorie
E.J Whitley
Margaret Deinzer
Carrie Lovette
Cornelia J. Smith

EDUCATIONAL SPECIFICATIONS FOR MATHEMATICS

Philosophy

The vital role mathematics plays in world culture and in scientific developments makes it imperative for the high school to provide the very best mathematical instruction for all students. With this in mind the mathematics department endeavors to offer courses which will prepare the college bound student with the background necessary to continue the study of mathematics. Such courses stress mathematical structure and thinking as well as computational skills.

In addition to the above great consideration must be given to those students whose formal education will terminate with high school. To this end courses must be provided which will equip students with the computational skills and mathematical concepts necessary for use in every day living.

Objectives

1. To provide courses which will meet the mathematical needs of each student
2. To stimulate interest in mathematics
3. To give insight into the nature and basic structure of mathematics
4. To encourage logical thinking
5. To develop good study habits
6. To instill within the student the desire to explore mathematical concepts beyond the course content
7. To develop neatness and accuracy in mathematical computation

Activities in the Mathematics Classroom

1. Lecture and blackboard demonstrations
2. Pupils work in groups at chalk boards
3. Demonstrations on graph chart
4. Pupils work at desks

5. Overhead projector used by both teacher and pupils in giving demonstrations in problem solving

6. Mathematical films and filmstrips are shown

The Mathematics Classroom
(All areas to be air conditioned)

I. The Mathematics Workroom

1. A cubicle with a desk for each teacher
2. A filing cabinet (4 drawer - legal size folders), which can be locked, for each teacher
3. At least two (2) math typewriters (IBM or its equivalent) and tables
4. One (1) large 4' x 15' work table in center of room
5. Two (2) cabinets with lockable doors for storage of models, charts, drawing instruments, board etc. - 6' high, 7' wide (each 3'6"), 3' deep
6. Shelves for departmental library - 10' long and 6 shelves high (as room divider for library area)
7. One (1) duplicating machine and table
8. One (1) 3M Brand Transparency Maker, Copier, Model 70 (or its equivalent) and table
9. One (1) electric pencil sharpener
10. Acoustical floor treatment
11. Two (2) reading tables 3' x 8' for library area
12. One (1) portable chalk board 5' x 9'
13. Electrical outlet for each cubicle
14. Desk type lamp for each cubicle

II. The Classroom

1. Chalk boards on 3 walls, the front, magnetic board to have 2 sliding panels (metal)* and a slide rule, demonstration type
2. A permanent graph chart (Cartesian) on one back panel of the front board (Mathmaster)
3. Fluorescent light along the top of the front (sliding) board

*Devise some method of allowing chalk dust to sift through bearings so as not to cause them to stick.

4. A ten inch wide shelf running along the top of all boards (for display of models)

5. A lavatory in each room

6. Teacher's desk with built in overhead projector or portable projector for each classroom

7. Pupil desks, the type easily adjustable to the size of the pupil, with formica tops (desks to be movable)

8. A bulletin board, on the fourth wall, large enough to display posters, graphs, etc.

9. All math classrooms to be grouped together; the math workroom to be included in this area

10. Roll type log and trig charts

11. Demonstration tables for general math classrooms

12. Storage cabinets, with doors that can be locked, in each classroom

13. Electrical outlets

    a. One in floor at teacher's desk so overhead projector may be used without the hazard of tripping over cord
    b. One in floor at back of room for use with movie and filmstrip projectors
    c. One on each wall so small hand vacuum cleaner may be used to clean chalk trays

14. Adequate lighting (not to allow glare on chalk boards)

III. Storage room for textbooks to be included with math area. Size 10' x 20' with adjustable shelves around 3 walls and on shelves in middle of room

Mathematics Committee:

Gertrude McMullen
Dorothy Cross
John Dukes
Joseph Hightower
Annie Mae Phillips
Jeselyn Cato
Ruth Wallace

Mildred Wanninger - Chairman

EDUCATIONAL SPECIFICATIONS FOR MUSIC

Philosophy

We, the public school music teachers of Alachua County, Florida, believe the following:

1. Each child has musical potential which should be developed to the utmost.
2. There is a significant cultural heritage in music which should be transmitted to the young.
3. The human need for aesthetic sensitivity should be dealt with through heightened perception and responsiveness to music as well as to the other arts. Aesthetic perceptivity can in large be taught, therefore learned. A feelingful response to the music is an individual concern. Thus, perception of the musical content of the songs children sing, pieces children play, and selections to which children listen becomes the focal point of aesthetic development in music.[1]
4. Music is a significant learning.
5. Music provides pleasurable experiences.
6. Music is rich in emotional values.
7. Music gives children opportunities for self-expression.
8. Music invites self-discipline.
9. Music promotes self-development.
10. Music is a vital, social force.
11. Music meets present needs and develops new ones.
12. Music enriches and supports other learnings.
13. Music offers a welcome "change-of-pace."

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[1] Articles #1-3:
Tipton, Gladys, "Allegro", issue No. 1, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1966, p. 1.

14. Music is important now and in later life.[1]

Goals

Grades 7 - 9[2]

The planned music program shall provide opportunities for each student to grow musically at his level of musical achievement, interest, and initiative by encouraging:

1. Increased personal satisfaction and responsiveness to music.
2. Increased sensitivity to expressive and emotional qualities of music.
3. Continued growth in aural recognition and discrimination of musical relationships: melodic and tonal, rhythmic, structure, and timbre.
4. Logical and expressive use of musical notation and symbols in playing, singing and listening.
5. Growth in musical and aesthetic value judgment through intellectual insight and emotional response.
6. A perspective of the cultural heritage as expressed in music literature.
7. Skills and techniques for expressive musical performance in general and special classes.
8. Initiative for getting musical experiences beyond those provided by the school.
9. Awareness of the professional and avocational possibilities of music in adult life.

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[1] Articles #4-14:
Herman, Edward J., Supervising Music in the Elementary School, Prentice Hall, Inc., Englewood Cliffs, New Jersey, 1965, p. 20.

[2] Articles for Grades 7 - 9
State Department of Education, Tallahassee, Florida: Accreditation Standards for Florida Schools, 1963.

"New Music"

Junior High

1. The junior high General Music course shall be required for all students in grades 7 and 8 for a total of 180 standard class equivalent meetings. A recommended scheduling of this offering would meet five days a week during each semester for both 7th and 8th grades.

2. Junior high music electives of band, chorus and orchestra may be offered during grades 7 through 9. Students electing such offerings which meet five days a week may be exempted from the junior high General Music required class. However, material and understandings which are basic to the General Music class will be incorporated into the learning situations of the elective performance classes.

Senior High

1. Students in grades 10 through 12 would be required to elect one course providing an aesthetic contact with music as an humanistic art. This requirement may be met by active participation in a performance oriented study, an historical or theoretical study, or an integrated "Allied Arts" or "Humanities Survey" study.

2. Performance electives would include small ensemble classes, exploratory or beginning instrumental or vocal studies, and large group classes in band, chorus and orchestra.

All Levels

An humanistic orientation should permeate the school curriculum. Regularly scheduled cultural offerings involving the student body would be:

1. Grade level or school wide "sings" (including instrumental accompaniments)

2. Special presentations and demonstrations by students or visiting artists

3. Periodic exposure to high quality performances such as symphony orchestra concerts, ballets and operas.

The Music Rehearsal Room

The music complex should be a part of the auditorium complex but back of auditorium, so band and chorus can enter easily from music complex.

Risers

Elevation - 8" generally preferred; 6" to 11" acceptable

Safety - (1) sturdy rail to prevent fall from riser side or back if riser does not extend to wall; (2) front edges of risers are clearly indicated and slipping prevented by white strip of paint (1½" wide), rubberized non-skid tread on edge of riser or carpeting.

Aisles - Side aisles; no center aisle in rooms intended for less than 120 students

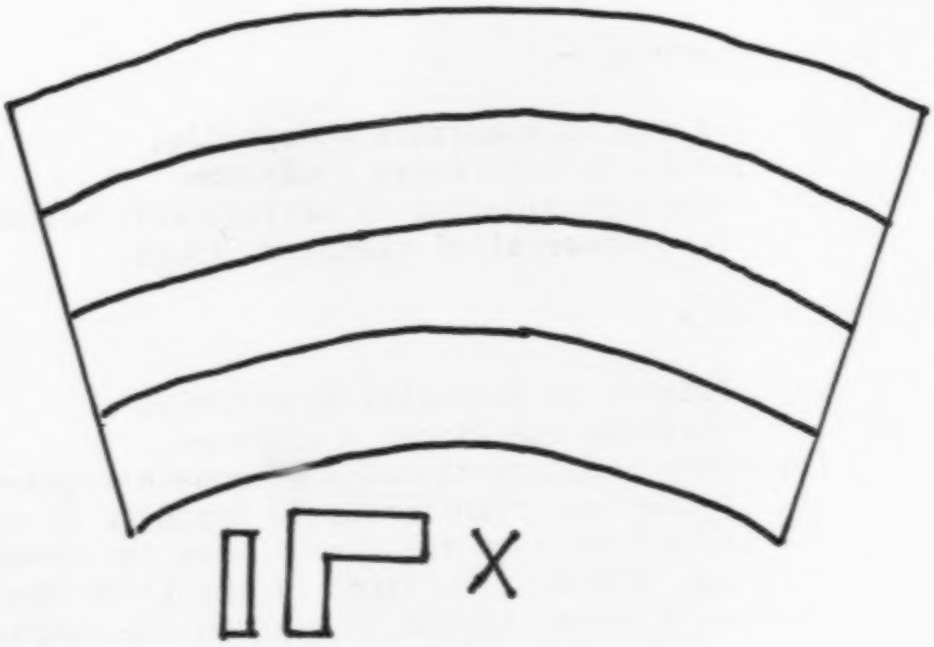
Depth - (1) Choral - provide sufficient room to seat student, provide knee and foot space, and provide sufficient aisle space in front of student's feet and for paraphernalia that might be placed on floor before student. (48" width is preferred; 42" to 54" is acceptable.)

(2) Band and orchestra - provide sufficient room to seat student, provide knee and foot space, provide room for music stand and instrument, and provide sufficient aisle space in front of student's feet and for paraphernalia that might be placed on floor before student. Larger instruments are usually placed toward the rear of most seating plans. Front rows should be a minimum of 66". Suggested depth (i.e., width) of instrumental risers is as follows:

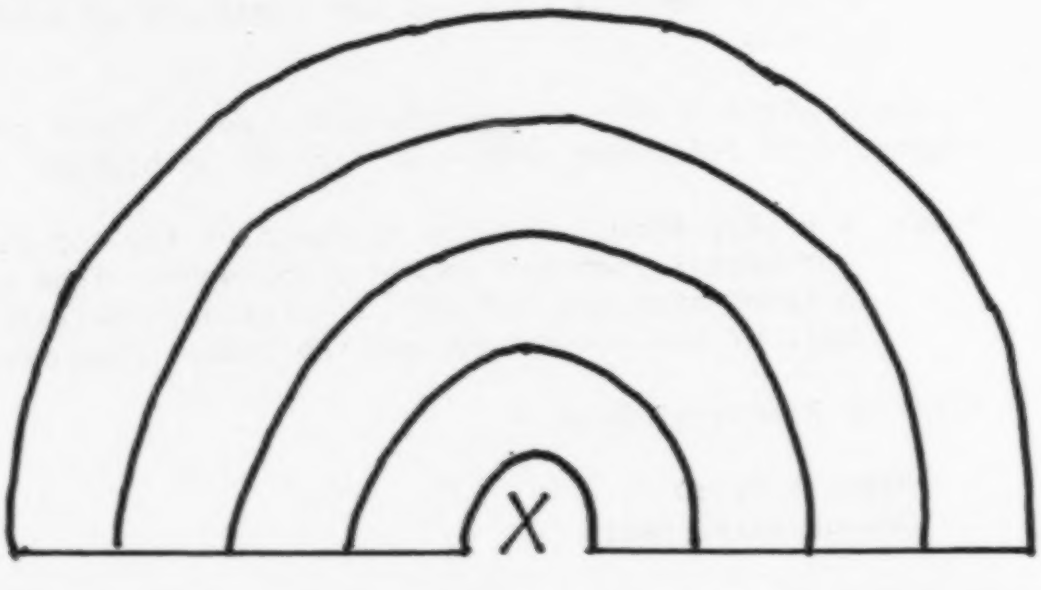
Row 5 (back)	6'	preferred;	5'6 to 7' acceptable
Row 4	4' 9"	preferred;	4'6" to 5'6" "
Row 3	4' 9"	preferred;	4'3" to 5'6" "
Row 2	4' 6"	preferred;	4' to 5' "
Row 1 (front)	floor	preferred;	floor "

Shape of Risers -

(1) Choral - slightly arched rows which seat equal number of students. Each row should seat 20 to 30 students. e.g.:



(2) Instrumental - graduated half-circles. Seating will vary due to space needs of instrument. e.g.:



Reverberation and Work Area

It is important that the space between the front row and the wall behind the teacher-director be sufficient to house teaching equipment, provide movable work space for the teacher, to make aisle space for movement of students, and to allow enough distance for reverberation of sound so that the teacher can hear a reasonably true performance of the group.

(1) Instrumental -

8' distance is generally acceptable.
12' should be considered a minimum
24' should provide both a satisfactory sound area and a few feet for rehearsal of simple routines.

(2) Choral -

16' distance is generally acceptable.
14' should be considered a minimum.
(Building facility should accommodate a grand piano, even if school does not plan immediate purchase of such instrument.)
24' is satisfactory for choral uses not involving extensive staging. The area in front of the first row ideally might include a space similar in size to the auditorium stage area. This would permit flexible use of the choral room for rehearsal of performances and productions to be later presented in the auditorium.

(3) General -

The choral room would be adaptable to General Music uses. "Staging" area in front of the first row of seats is most important.

Ceiling height - 14'; acceptable with proper "head clearance" as suggested in following note - 12' to 18' or higher.

Note: A 6' boy should be able to stand on the top riser of an instrumental room and remove a sousaphone from over his head without stooping and with 2' clearance between top of the bell of the sousaphone and the lowest fixtures in the ceiling.

Shape of Rehearsal Room

H:W:L = 2:3:5
Non-parallel walls

Acoustics

An acoustical expert should be consulted unless the architect has proven his knowledge of music and acoustical engineering by repeatedly successful music buildings.

Reverberation time for auditoriums should be between .8 and 1.1 seconds for a drop of 60 decibels. Most music teachers prefer the rehearsal room to be much "deader" than the auditorium or performance area. Many new materials - including acoustical tiles, sound absorptive walls and ceiling material, carpeting - suggest the architect or acoustical engineer be more concerned with such problems than the school specifications. Teachers are justifiably concerned that they hear their students in a rehearsal room with the accuracy that an audience may hear them in a performance area. With a microphone placed over or behind the director-teacher, a good tape recorder should be able to record the various instruments and voices with fidelity and balance of voices or instruments, regardless as to their position in the room.

Ventilation should be so ducted that sound is not transmitted between rooms. Outside noises - such as street traffic, play grounds, cafeteria, gymnasium, machine or mechanical sounds - should not enter music rooms. Fans should be "noiseless"; i.e., properly ducted.

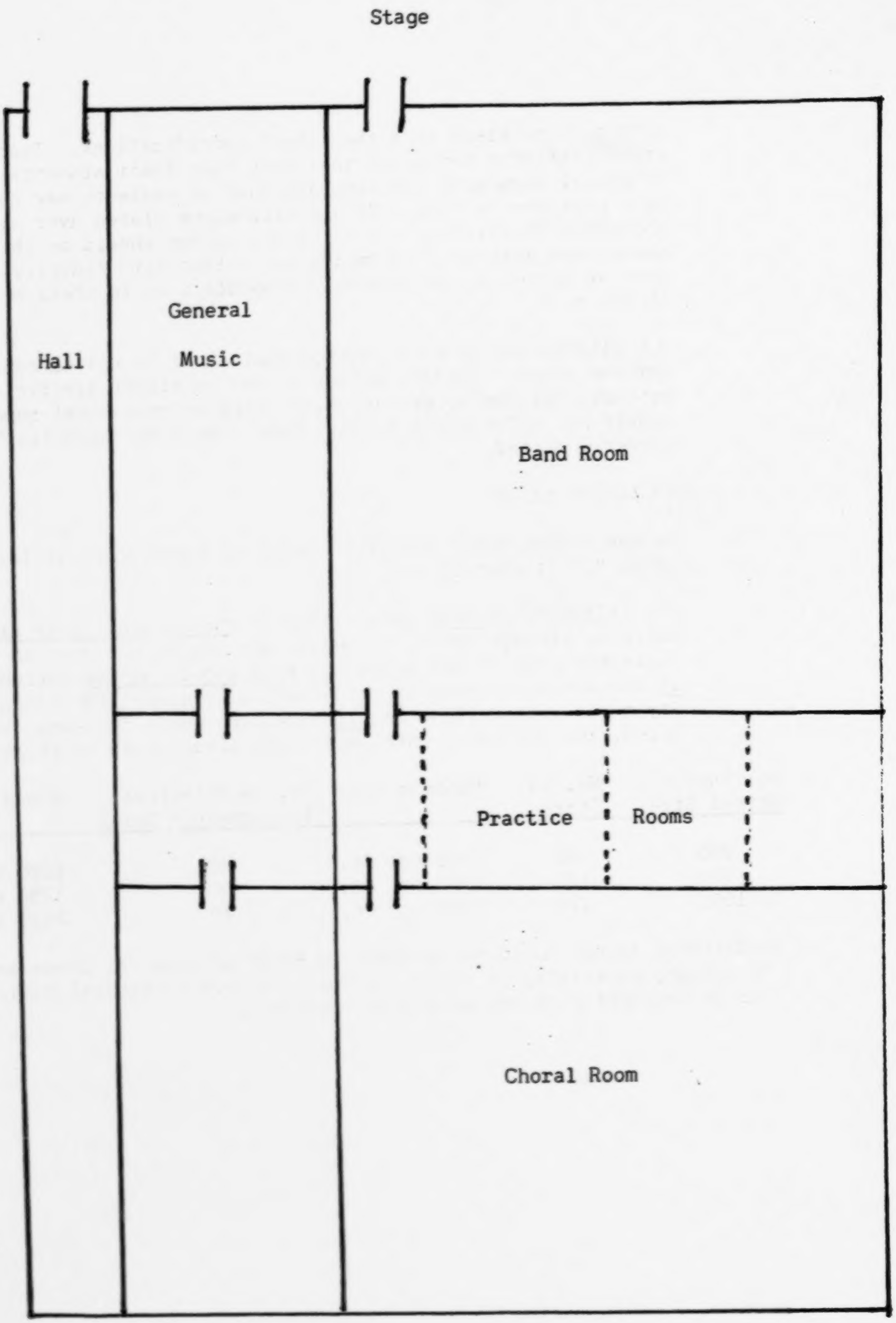
Accreditation sizes

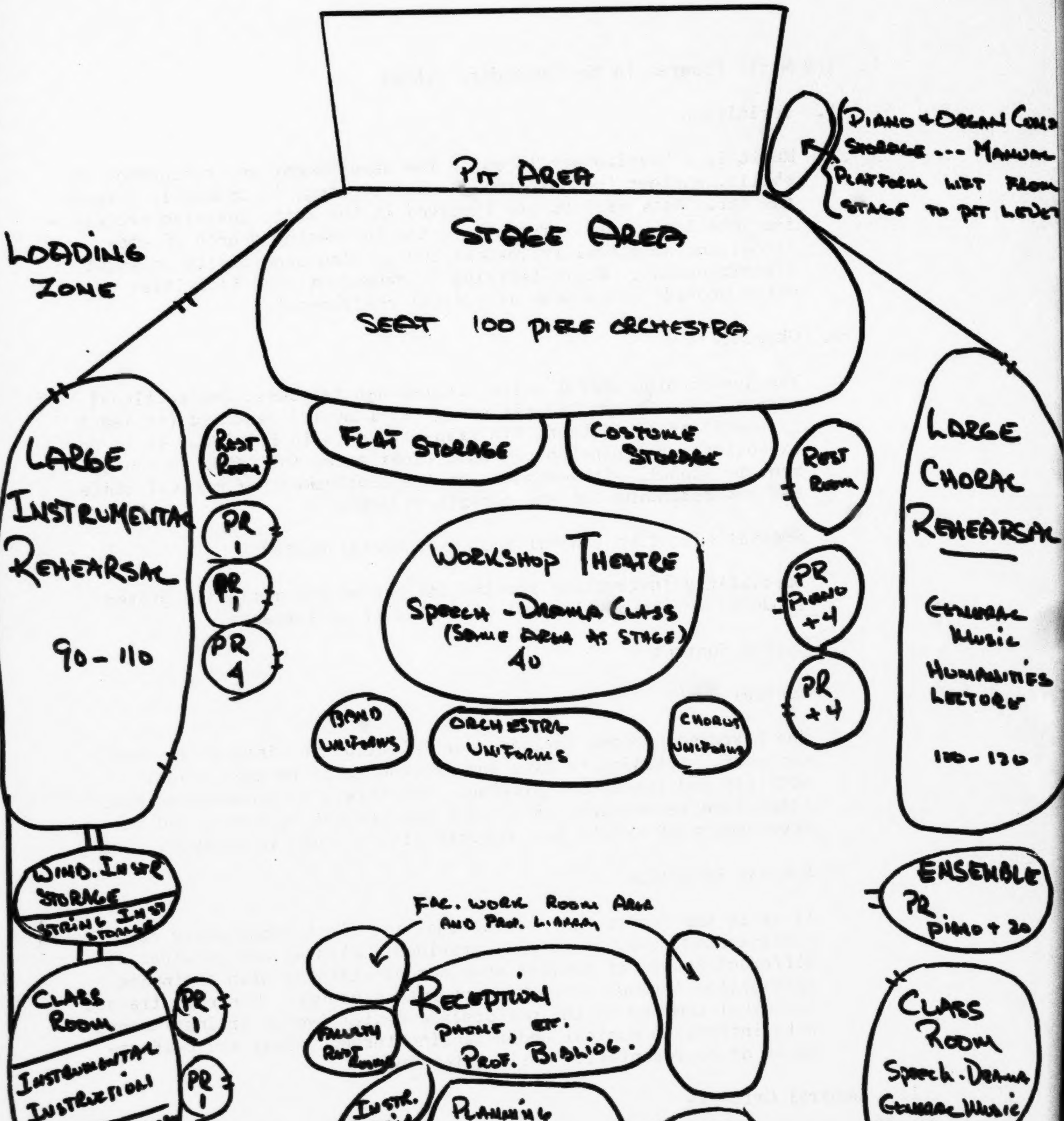
No new school music facility should be constructed at less than level "3" standards.

The following minimum areas refer to actual used floor area. Closets, storage space, hallways, and spaces not used in the "working" area of the rehearsal room should not be included. If the administration is sympathetically committed to top quality music instruction, and if excellent music teachers are hired, the following enrollments and areas would be found:

No. Pupils School Size	*No. in Chorus	Minimum Size	No. in Principal Instrumental Group	Minimum Size
300	85	1340 sq. ft.	80	1600 sq. ft.
700	100	1520 sq. ft.	90	1750 sq. ft.
1500	120	1760 sq. ft.	110	2150 sq. ft.

*Additional space should be provided in front of room for piano and "staging", especially if choral room will double as General Music room or if auditorium is not generally available.


Stage
General
Music
Hall
Band Room
Practice
Rooms
Choral Room


PIT AREA
PIANO + ORGAN CONS
STORAGE --- MANUAL
PLATFORM LIFT FROM
STAGE TO PIT LEVEL
STAGE AREA
SEAT 100 PIECE ORCHESTRA
LOADING ZONE
LARGE INSTRUMENTAL REHEARSAL
90 - 110
REST ROOM
PR 1
PR 1
PR 4
FLAT STORAGE
COSTUME STORAGE
REST ROOM
WORKSHOP THEATRE
SPEECH - DRAMA CLASS
(SAME AREA AS STAGE)
40
PR PIANO + 4
PR + 4
LARGE CHORAL REHEARSAL
GENERAL MUSIC
HUMANITIES LECTURE
100 - 130
BAND UNIFORMS
ORCHESTRA UNIFORMS
CHORUS UNIFORMS
WIND. INSTR STORAGE
STRING INSTR STORAGE
ENSEMBLE PR PIANO + 20
FAC. WORK ROOM AREA AND PROF. LIBRARY
RECEPTION
PHONE, ETC.
PROF. BIBLIOG.
FACULTY REST ROOM
INSTR. REPAIR
PLANNING + CONFERENCE
STORAGE PA EQUIPMENT
CLASS ROOM
INSTRUMENTAL INSTRUCTION
ACADEMIC THEORY HISTORY ETC. 40
PR 1
PR 1
PR 1
CLASS ROOM
SPEECH - DRAMA
GENERAL MUSIC
THEORY - HISTORY
40
★
★
★
★ ENLARGEMENT WHEN NEEDED

I. The Music Program in the Secondary School

A. Definition

Music is a hearing art in which the development and refinement of skills, whether for performance or listening, is primarily through the ear. Many factors are involved in the music learning process - the intellect, muscular control, the increasing degree of emotional and spiritual refinement and growing sensitivity in aural discrimination. Music learning is dependent upon facilities which provide an optimum acoustical environment.

B. Objectives

The junior high school music program has two basic instructional objectives. General Education (general music) required (at least 12 weeks) of all 7th and 8th grade students in Florida. It is an extension and expansion of music experiences initiated in the elementary school, with emphasis on the development of musical taste and understanding for the general student.

Special education (choral and instrumental music)

Specialized instruction for the interested and musically gifted students in the development of skills of performance.

C. Course Content

General Music

The learning process includes participation in singing, rhythmic movement, listening to live and recorded performance, creative activity and instrument playing. The stress is centered on music literature representative of past and present cultures, and the development of skills for understanding and use in everyday living.

Special Education

It is in the junior high school that the first opportunity for concentrated study is usually provided. Classes are provided at different levels of musical development starting with beginning instruction through advanced performance groups. Content stresses technical command of the performance medium (voice or instrument) with increasing musical understanding through study and performances of representative music literature.

II. General Criteria

A. Location

1. Music facilities should be located in such a way that:

a. External distractions (highways, classes in physical education and industrial arts, playgrounds, and the like) will not interfere with music learning. Air conditioned structures correct this.

b. The transmission of sound from the music area will not interfere with learning in other school areas.

c. Accessibility to the facility used for school assemblies, public programs and concerts is provided (behind the auditorium).

2. Caution should be exercised when considering:

   a. Basements of buildings due to dampness, poor lighting and floor supports which act as sounding posts, transmitting and amplifying sound from above.

   b. Top floors of buildings due to difficulty of moving and transporting heavy or numerous items of equipment, disturbance of classes below, and accessibility to night functions which necessitates opening the entire building.

   c. Gymnasiums, cafetoriums, gymnatoriums and auditorium stages due to poor acoustics, conflicting schedules or lack of storage.

B. Acoustical Environment

Acoustics, as described here, pertain to transmission of sound within the music area and the controlling of sound within a specific room in this area. Total absorption of reverberation in a music room is neither necessary nor desirable, but control of sound within a specific room in this area is a requirement.

Planners of music facilities are urged to study carefully Chapter 7, "Acoustics" of the bulletin, Music Buildings, Rooms, and Equipment, published by the Music Educators National Conference. This chapter is authored by Richard Bolt of the Massachusetts Institute of Technology. It is a thorough discussion of the acoustical needs of music facilities and auditoriums.

Many related factors contribute to good acoustical environment.

1. Layout

   a. Centers of instruction in choral and instrumental facilities (focus of sound) should not face each other.

   b. Dead air space (office, storage, library, hallways, and the like) should be located between the choral and instrumental rehearsal rooms.

2. Shape of rehearsal rooms

   a. Recommended room proportion is as follows: H:W:I :=2:3:5

   b. Non-parallel walls for rehearsal, ensemble and practice rooms are a pre-requisite. Moderately splayed (zig-zag) walls are recommended.

3. Thermal control and ventilation

   Poorly designed heating and ventilation frequently cause acoustical problems by:

   a. Transmitting sound to other school areas and within the music area.

   b. Contributing to the quality of acoustics within a rehearsal area. Energy output and bodily heat is greater in music rooms due to the nature of music learning, physical involvement and larger classes.

   A complete change of air should be effected every three or four minutes.

   When square footage of window space is the same or more than a normal classroom, open windows transmit sound to other school or music areas. When the windows are closed, the sound is not absorbed and consequently continues to reverberate within the room, causing echoes and flutters.

   Inasmuch as windows do contribute to adequate acoustical control, some type of mechanical ventilation or air conditioning must be provided. For example, large diameter, slow speed fans mounted to eliminate reverberation noise. Location of these fans should be as far away as possible from teaching point so that motor and blade noise is not disturbing. The use of a plenum chamber is recommended.

   Heating or air conditioning ducts frequently cause transmission of sound within the music area. The duct system serves each large rehearsal room. For other rooms in the area an off-set insulated, baffled duct system might be used to minimize this problem.

4. Materials of construction

   It is recommended that architects and music facility planners study illustration 43, chapter 7 on "Acoustics"[1] which lists the sound absorption coefficients of common building materials.

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[1] Music Buildings, Rooms, and Equipment. Music Educators National Conference.

5. Acoustical Treatment

Treatment of ceilings, front walls, and partial treatment of the rear walls of large rehearsal rooms is standard practice. The side walls should be treated if needed.

Acoustical treatment of floors with risers constructed of wood or asphalt tile covering of concrete are recommended. Bare concrete is undesirable both for low absorption of sound and as a health hazard from the dust.

C. Lighting

Lighting should be planned so as to provide 65-foot candles for every room area at reading height. This can be provided by either fluorescent or incandescent lighting or a combination of both.

These are ordinarily the recommendations of lighting engineers: Recommendation concerning acoustical treatment, thermal control, ventilation and lighting.

It is recommended that music facilities, particularly rehearsal areas, be designed for all-weather air conditioning for a year-round temperature control of 70 - 72 degrees. It is recommended that these facilities be solid wall construction. High strip windows may be used.

D. Sanitary Facilities and Water Fountains

Because the music area is frequently isolated and the facilities are used by a high percent of the total school enrollment, it is recommended that restrooms be provided within the music area or immediately adjacent to it. Due to the fact that in music performance students must do much of their breathing through the mouth and therefore drying membranes, it is recommended that a refrigerated water cooler be placed in recessed space in hallway within the music facility.

E. Space

1. Space requirements will be different for each type of music class. The difference is due to:

   a. The nature of the music learning activity.
   b. The size of the largest class.
   c. Types and sizes of musical instruments.

2. Because the volume of sound produced by combined voices or instruments the teaching of music requires a larger room than the average classroom. A space allotment of 280 cubic feet per student is recommended for music classrooms.

III. Specific Recommendations

A. General Music

As this subject is required of all students in grades 7 and 8 the room must be designed for the learning activities described in Section I and a class enrollment of 35.[1]

1. Room size - the overall size should be one thousand square feet.

2. Acoustical treatment - ceiling and front wall with partial treatment on the rear wall desirable.

3. Storage facilities

   a. Minimum of 25 feet of shelving for book storage.
   b. A lockable closet and/or cabinets for storage of phonograph, tape recording equipment, rhythmic and melodic instruments. This should also include shelving for vertical storage of phonograph records.

4. Electric outlets, two on the front wall, one each on the other three walls.

5. Tack and bulletin boards

   a. Cork board, for displays and notices, 3' x 4' is desirable.
   b. Cork board borders above chalk boards

6. Chalk boards

   One section of the board should be lined with musical staves. The lines should be approximately 1" apart and 4" between staves. Some manufacturers will line the board at the factory.

7. Basic equipment

   a. Movable chairs with dropleaf arm and book rack under seat
   b. Piano of excellent musical tone quality and construction, mounted on a dolly
   c. A quality high fidelity phonograph 3-speed mounted on a table with wheels, or a component system with turntable, amplifier and speakers in enclosed cabinet
   d. Two legal size 4-drawer metal filing cabinets for sheet and octavo music
   e. Desk and chair for teacher
   f. Vertical file for storage of material

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[1] State Accreditation Standards, p. 6, Section 26.

B. Choral Music in the Junior High School

In designing this facility planners should consider school curriculum and scheduling patterns, present and future. For example, if this facility is to be used exclusively or almost entirely for choral music, then it is suggested that risers be included in the design. If it is to be used for choral activities only one or two periods a day and general music the remaining time, then it is recommended that risers be omitted in construction.

Basic Music Facility

1. Large rehearsal room
    a. A minimum of 900 square feet of floor space must be provided as a basic size for a choral facility. It is planned for a maximum of 60 students in a rehearsal period. In larger schools or more extensive programs in smaller schools, the rehearsal area should be increased 12 sq. ft. per additional student. Formula: 900 + 12 sq. ft. x number of additional students - recommended floor space. The basic rehearsal area for 110 students will then be 1500 sq. ft.
    b. Minimum ceiling heights should be 14 ft. and increased to 16 ft. in larger rooms.
    c. Flooring and risers

        Where risers are planned, they should be of wood or poured concrete integral with the floor. Risers should be designed on a radius at 8" levels and 32" deep. For the recommended minimum size room for 60 students, three riser levels above the floor; for large rooms, four risers above the floor.
    d. Tack and bulletin boards

        Two 3' x 4' cork boards on wall for display and notices, near entrance to the room or near teacher's office.
    e. Chalkboards

        One section of the board should be lined with musical staves. The lines should be approximately 1" apart and 4" between staves. Some manufacturers will line the board at the factory.
    f. Electrical outlets

        Two outlets should be provided on the front wall and two on the rear wall.

2. Office and library

    If two separate facilities are planned the office should be a minimum of 120 sq. ft. or a room 10' x 12'. The library should be a minimum of 150 sq. ft. or a room 10' x 15' to provide space for a working table and room for two or three letter size 4-drawer filing cabinets.

The office should be equipped with a desk for the teacher, filing cabinets and several additional chairs.

3. Robe storage

   Robe storage is optional. A minimum of 40 sq. ft. for 60 robes in a space of 2 ft. x 20 ft. Plan for 3 robes per lineal ft. for increased storage.

4. Ensemble room

   This room is used for ensemble practice and sectional rehearsals. The minimum area is 10 ft. x 12 ft. One ensemble room is recommended for the average size secondary school. In schools with total enrollment of 1500 students and up, two are recommended.

5. Acoustical treatment

   See statements under II.

C. Instrumental (Band and Orchestra) Music

The instrumental program in some Florida school systems has reached the stage of development where it is necessary to provide separate facilities for band and orchestra. Specific reference is made to the rapid development of the orchestral program. Where this is occurring, it is recommended that a separate rehearsal room be provided for each.

Basic Music Facility

1. Large rehearsal area

   a. The basic minimum room size adequate for a maximum of 40 students per rehearsal is 900 sq. ft. For larger programs and larger schools, the rehearsal space should be increased by adding 15 sq. ft. per additional student. Formula: 900 + 15 ft. x number of additional students = recommended floor area. A reasonable basic rehearsal space accommodating 110 students will then be 1950 sq. ft.
   b. Minimum ceiling heights should be 14 ft. and increased to 16 ft. in larger rooms.
   c. Risers

      Permanent riser construction is recommended, wood or poured concrete integral with the floor. It is generally accepted that the height of each riser will be 8" constructed on a radius. All platforms except the top platform should have a minimum depth of 4 ft. Top risers should have a minimum depth of 5 ft. Maximum platform depth can run up to 1 ft. more per platform if the space is available.

d. Acoustical treatment

See statements under II.

e. Chalkboards

One section of the board should be lined with musical staves. The lines should be approximately 1" apart and 4" between staves. Some manufacturers will line the board at the factory.

f. Tackboards

Two 3' x 4' cork boards on wall for display and notices, near entrance to the room or near teacher's office.

g. Electric outlets

Two on the front wall and two on the rear wall.

h. Basic equipment

(1) Music stands of non-folding telescopic, metal with heavy non-breakable base should be supplied at a ratio of one: one and a half student.
(2) Chairs, non-folding
(3) Conductor's podium
Movable, approximately 8" high and 3 ft. square

2. Practice rooms

6' x 8' minimum size, and acoustically treated with nonparallel wall. Basic minimum number regardless of school size is two for a school of 300 enrollment. For each 500 additional students of school enrollment, add two additional practice rooms.

It is desirable that practice rooms be on the same floor level as rehearsal space for direct supervision. Doors should include a small viewing window. It is recommended that an inter-com system be provided between practice rooms and in directors' office. One electrical outlet should be provided in each room. Adequate ventilation is strongly recommended by mechanical or air conditioning with attention to control of sound transmission.

3. Instrument storage

a. Rooms should have two door openings for control and flow of traffic.

b. Size based on a ratio of two square feet per total students enrolled in the band and/or orchestra programs.

c. Shelving should be computed on the following basis:

Shelving (the dimensions below provide adequate space to store one instrument as listed.)

(1) Piccolos, flutes, oboes, and B-flat clarinet - 13½" x 5 3/4" x 23½"
(2) Tenor sax, trombones, bass clarinets, violin and viola - 13½" x 9" x 36½"
(3) Alto saxes, trumpets, cornets, and mellophones - 23½" x 19 3/8" x 23½"
(4) French horns, baritones, and snare or field drums - 23½" x 18 3/4" x 36½"
(5) Bass viol - a storage rack is recommended - 75" x 19 3/4" x 36½"
(6) Cello - Cello storage rack is recommended
(7) Sousaphone - an especially designed sousaphone chair is recommended.

4. Office

A minimum of 120 sq. ft. or a room 10' x 12' should be provided.

5. Library (Explore possibility of joint use of office-library by chorus and band to control use of too much space for non-teaching area.)

A minimum of 150 sq. ft. or a room 10' x 15' to provide space for a working table and to provide space and room for 2 to 4 lettersize 4-door metal filing cabinets.

6. Uniform storage

A minimum area of 8' x 10' provides space for 40 uniforms. For each additional uniform 2 sq. ft. should be provided, shelving for hats and other accessories should be provided above uniform rack. When a separate room is planned a dutch door should be used.

IV. Sources of Help

Planners of music facilities (architects, music teachers, administrative officials and supervisory personnel) will find Music Buildings, Rooms, and Equipment, published by the Music Educators National Conference, NEA Educational Center, 1201 Sixteenth St., N.W. Washington 6, D.C. of particular help in their task.

Pertinent and detailed information concerning music facility layouts, acoustical treatment, stages, auditoriums, shelves, illumination and color, heating and air conditioning, equipment and extensive bibliography can be found in this above mentioned publication. It is recommended that this book be placed in the professional library of each school architect and of each County Board of Education.

V. Problems That Merit Further Study or Consideration and Require Additional Research

   A. It is recommended that in county school systems where several music facilities will be planned and constructed during these next several years that:

      1. Several different plans be developed for Junior High School music facilities

         a. All instructional personnel in this particular administrative division should participate.
         b. That architects be involved from the start.

      2. Research and studies should be concerned with:

         a. Transmission of sound within the music area (dead air spaces, hallways, heating and ventilation ducts, doors, and the like)
         b. Transmission of sound to other school areas (location of music facility in relationship to the total plant)
         c. Acoustical control of sound within the different rooms in a music area

            (1) Room shape, materials or construction, use of baffles and the like

      3. Thermal control and ventilation, developing a system for mechanical ventilation, placement and housing design of the like.

   B. Comparative study of room temperatures between music classes and regular classes at various times of the year to determine if there is a significant degree in heat increase caused by music learning activities and larger group of class enrollment as against normal academic classes.

      1. Confirm or advise what is described as adequate rehearsal room size for choral, instrumental music groups of varying sizes.

      2. Use of solid wall construction with high strip windows with fluorescent light to determine degree of stroboscopic illusion and determine if claustrophobia is present because of lack of windows.

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Dr. Richard Warren, State Music Consultant, and Miss Carolyn Day, Supervisor of Music Education, Duval County, loaned invaluable materials in assisting the committee.

EDUCATIONAL SPECIFICATIONS FOR PHYSICAL EDUCATION IN THE SECONDARY SCHOOLS

Physical education in the secondary schools is an essential part of the total school program. If taught correctly, it can contribute immeasurably to the pupil's intellectual, emotional, and social development. Its purpose is to help each one grow to his maximum potential as an individual and as a member of a democratic society. Its objectives are: (1) to provide opportunities for physical development, (2) to provide opportunities for mental development and (3) to provide opportunities for the development of desirable social growth and emotional adjustment.

Adequate space and proper facilities are important to the development and the offering of a physical education program that will meet the needs of children of all grade levels in the secondary schools. In planning the outdoor facilities for a secondary school the size of the playground area is dependent upon (1) the program to be offered and (2) the number of pupils using the facilities during the peak load. The following areas are recommended for a desirable secondary school playground:

There should be a hard surfaced multiple purpose area 100 feet by 120 feet for basketball, tennis, paddle tennis, badminton, volley ball, shuffleboard and rhythms. Standards or posts should be removable. Sleeves may be set in concrete to accomodate the standards for different games. Caps or plugs should be used to close the surface opening when the standards are not in use. An electric outlet for a record player, basketball backboards and goals for two courts and permanent line marking should be included.

An area for track and football will require approximately 260 feet by 590 feet. The axis of the football field, surrounded by a ¼ mile 24 foot wide track, should run north and south. If the football field is not to be used for regular physical education activities, an additional area should be provided.

Field games for the high jump, pole vault, broad jump, and shot put will require about 200 feet by 400 feet.

A total area of 350 feet by 350 feet is recommended for a baseball field. A backstop 60 feet from home plate should be constructed. The field should be properly oriented with the sun, with home plate either in the southwest or northeast corner.

Approximately 60 feet by 80 feet will be needed for five horse shoe courts. Courts should be so located as to eliminate any cross traffic to avoid anyone being struck by a pitched horse shoe.

A space 30 feet by 100 feet should be set apart for such equipment as chinning bars, vaulting bars, parallel bars, horizontal ladders, climbing ropes, etc. This space should be located near one side or end of the playground in such a way as to eliminate cross traffic through the area.

An archery range, which would provide for a maximum shooting distance of 50 yards, will require an unobstructed area approximately 90 feet by 225 feet. This will provide space for three targets. A naturally isolated location with a bank to stop the arrows is desirable.

A practice green or turf area of approximately 100 feet by 100 feet is recommended for short approach shots and putting. At times an isolated section of the larger areas may be used for longer shots.

A turf area of approximately 100 feet by 200 feet should be set aside for games of low organization and informal activities.

For a school of 800 pupils at least two hard surfaced tennis courts should be provided. The space for this would be 50 feet by 120 feet. For 1200 or more pupils, an additional two courts will be needed.

Outdoor Areas for Secondary Schools

		Number of Areas			
Number of Pupils (enrollment)		800	1000	1200	1400
Types of Areas					
Multiple-Purpose	100 x 120	1	2	2	2
Track and Football	260 x 590	1	1	1	1
Field Games	200 x 400	1	2	2	3
Baseball	250 x 350	1	1	1	1
Horseshoes	60 x 80	1	1	1	1
Apparatus	25 x 100	1	1	1	1
Archery	90 x 225	1	1	1	1
Golf	100 x 100	1	1	1	1
General Area	100 x 200	2	2	4	4
Tennis Courts	50 x 120	2	2	4	4

Total playground acreage for an 800 pupil school will be approximately 10½, for 1000 pupils 12.6, for 1200 pupils 13.8, and 1400 pupils 15.6. Two additional acres should be provided for a driving range for driver education for a school with an enrollment of 1200 or more pupils.

A gymnasium with an auxiliary teaching room is necessary for the presentation of a well rounded physical education program. Furthermore, a certain amount of cold weather and seasonal rains will interfere with the physical education program if the school plant lacks indoor facilities. The gymnasium should be located in close proximity to playing fields and parking areas, so that the noise will not disturb other school classes, and to avoid crossing of highways or service roads by those using it.

A gym serving a school of 800 to 1200 pupils would require floor space of approximately 100 feet by 110 feet. This would provide for some folding bleachers, a main basketball court 84 feet by 50 feet and two teaching areas for basketball and other activities. The height of the ceiling should be 22 feet.

The auxiliary room should have not less than 1500 square feet for a school with an enrollment of 1000 and 2000 feet for one with an enrollment of 1200 or more. It should be located near the storage room.

The storage room should be large enough to provide space for all equipment currently in use. It may consist of one room to serve both boys and girls or separate rooms. It should have a check out window for dispersing equipment. Forced ventilation is desirable; air conditioning is best.

Some kind of arrangement is necessary for storing equipment not in current use. Space is also needed for storage of football equipment, track equipment, and baseball equipment.

Ideally, shower and dressing facilities should be designed as an integral part of the gymnasium; however, many times it is not possible to finance complete gymnasiums. In these cases, it is recommended that the shower and locker rooms be so designed that the playing floor and the auxiliary room can be added later.

The size of the locker room will vary with the type of locker system used and the size of peak load to be accomodated. If the room is to be used as a dressing room for inter-scholastic football, and additional 24" by 24" space should be alloted for a storage locker for each team member. The floor space for a locker room should be determined as follow: (1) a dressing space of 12 to 14 square feet for each pupil during the peak load (largest class plus 10 percent), (2) a space of 12" x 18" for each two individual lockers, (3) a space of 12" x 12" for each six baskets used, and (4) a space 24" x 24" for each football locker used. Towel storage space should be provided.

The size of the shower rooms should be determined by the largest number to be served at any given time. Shower heads should be spaced 3' 4" apart. Fifteen square feet of use space should be provided for each head. The shower room should be connected to the dressing room, team rooms, and toilet rooms.

Toilet rooms should be provided in the shower and dressing suite. These should be separate from those provided in the gym for public use. There should be one toilet and two urinals for every 50 boys. There should be one toilet for every 30 girls. The ratio of lavatories is one for every 20 pupils (boys and girls).

Other facilities should include office space and dressing units for the physical education teachers. Desks, chairs, bookcases, and filing cabinets should be provided.

A conference room approximately 12 feet by 15 feet located near the offices is needed for teacher-pupil conferences, committee meetings, and intramural board meetings. Departmental rooms needed, one 6' x 8' for men and one for women.

A room for storing custodial supplies such as disinfectants, mops, buckets, etc. will be needed. The room should be adjacent to and open into the boys' dressing room. A room similar to that of the male custodian should be provided in the girls' dressing room.

General Recommendations

1. No electrical outlets or equipment connectors in the main gym floor, put outlets on end walls.

2. Terrazo type floor covering across each end of gym floor, approximately 6 feet wide.

3. Include sand traps or water traps or some equivalent facility at each outdoor entrance to gym and locker room to cut down on maintenance.

4. Electrical basketball goal lights; at least 6 basketball goals in gym.

5. Different colored lines for a variety of sports should be placed on gym floor before it is varnished, i.e. basketball, badminton, shuffleboard (off the main court).

6. For Junior High, the gym should have no inside lobby entrance. Movable bleachers should be included in all gyms.

7. Locker room should include locker units with one large locker unit and smaller locker units around it (around sides of the room but not in center of room.)

Top

A	D	
B	E	
C	F	
A	D	2 units
B	E	
C	F	

Bottom

8. Storage rooms with double doors, 2 large areas off gym floor for equipment storage (large enough for trampoline and other gymnastic equipment to be stored properly.) Use properly designed storage such as ball racks, shelves, hanging hooks, etc.

9. Team dressing rooms for high school interscholastics.

10. Official size indoor swimming pool.

11. Air conditioned gym should also serve as fall out shelter. Minimum of four outside entrances (double doors) with doors between lobby and entrance to main gym area for Senior High.

12. Drinking fountains in locker rooms.

13. Safety devices or non skid areas in shower room to prevent slipping and falls.

14. No gang showers for girls; use individual shower stalls.

Junior High

*1. Enclosed swimming pools in areas. (Serving more than one school, elementary and secondary)

*2. Driving range in an area rather than as a part of school site, removed from site preferably. In order to reduce conflict of interest between common use of track by PE and driver education

3. Movable partition in gym with overhead track - to separate boys and girls for these sports not coed

4. Built in bulletin boards, glass enclosed, in gym area 5' high x 10' long

5. Folding doors instead of conventional doors throughout most of physical education area

6. Do not place offices next to shower rooms.

7. AV provisions in classrooms and/or *multi-pupose room, desk with* built in projector in desk, and built in screen - storage for films and film strips, records and record player

8. Two bowling lanes in gym

9. Towel storage room should be provided in locker rooms.

*These provisions are not included in present space allocations and costs approved by Board of Education, but are considered desirable and listed herewith as second priority items.

Recommendations for Physical Education Facilities and Equipment

Following is a tentative list of Physical Education facilities and equipment for secondary schools.

Gymnastic Equipment

5 regular ropes
1 knotted rope
1 set of rings
1 side horse
1 parallel bar with conversion kit
1 balance beam, adjustable
2 trampolines
2 overhead safety belts, one with full swivel
1 set of triple stall bars
2 horizontal bars, high school, adjustable
1 horizontal bar, adjustable, junior high school
1 reuther board
30 4' x 8' tumbling mats (also to be used for wrestling)

Wrestling

1 regulation high school wrestling mat cover

Softball

Minimum of 2 softball backstops with a minimum of 180 foot foul lines

Hard Surface Area

4 basketball courts
4 tennis courts with fencing on end of courts
4 backboards or volley boards

Track

1 six-lane 440 yard hard surface track
2 broad jump pits
2 high jump pits with standards
1 pole vaulting pit and standards
1 shotput circle
1 discus circle

Baseball Field (high school only)

1 regulation baseball field with 300 foot foul lines, 360 feet to center field with dugout and fence

Soccer

2 sets of movable soccer goals

Archery Backstop

Mound of dirt 4 to 5 feet high and 50 yards long with portable archery standards

Football (high school only)

1 football stadium
2 practice fields with goals (goals should be placed so they will not interfere with open area)

Football (junior high only)

2 football fields with goal posts (goals should be placed so they will not interfere with open area)

Handball (high school)

6 regulation handball courts

Swimming Pool

1 L-shaped 25 meter by 25 yard pool

Athletic Dressing Facilities

Lockers to accommodate football gear for a minimum of 120 boys; suggested lock size for high school is 18" x 18" x 36", for junior high school is 15" x 18" x 36". Lockers should have adequate hooks and ventilation.

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EDUCATIONAL SPECIFICATIONS FOR SPECIAL READING CLASSROOMS

Philosophy

The teaching of reading in the schools is of prime importance to the general public. Of all subjects, reading receives more attention and is subjected to more criticism from lay people than any other. The ability to read is the cornerstone on which a child will build his manual and mental skills.

Materials have been developed specifically to combat reading retardation and to promote increased ability of proficient readers.

Specific Objectives

1. To increase reading proficiency and diagnose minor reading problems

2. To develop basic skills, such as attacking new words, increasing vocabulary, or understanding basic parts and functions of words by using materials more suited to the needs of slow learners and/or culturally deprived

3. To create an atmosphere conducive to "wanting to read" and to increase young people's appreciation of literature

4. To improve oral communications skills which of necessity must precede careful interpretation of written materials

5. To provide for increasing and enriching children's background and experiences, so that they will be more able to interpret and relate to the materials which they will be reading

6. To improve the teacher's understanding of the reading problems of these pupils

General Characteristics

1. Size

   Corrective Reading Room: minimum square footage should be 600 with a pupil capacity of 15

   Language Laboratory or Reading Resource Center: especially recommended for junior and senior high schools, should have a minimum square footage of 750 with a pupil capacity of 30

2. Location

These rooms should be located in the intructional part of the school plant, with reasonable proximity to the library or materials center.

3. Atmosphere

These rooms should be well-lighted, either naturally or artificially, depending upon the style of the building. They should be well ventilated, pleasant and colorful in appearance, looking more like a children's library than a traditional classroom.

Specific Characteristics

Taking into consideration the modifications which would be necessary depending upon the size of the room upon which the planners decided, the following recommendations are made:

1. Movable room dividers would make it possible for more than one teacher to work with children at the same time.

2. There should be the widest possible variety of reading materials available including instructional materials, audio-visual equipment, and enrichment materials.

3. Provisions for specific "centers" or areas and the equipment and furniture for each are as follows:

   a. Audio-visual Center

To be equipped with:	Controlled Reader Tachistoscope Overhead projector Tape Recorder Record Player Filmstrip machine
Furniture to include:	A wall cabinet 10' x 16" x 31", with a counter top upon which equipment could be set, and closed, under-counter storage space; a small study table and several chairs; a wall space for projection; and a bulletin board or half-bulletin, half-chalk board above the wall cabinet. Two electrical outlets on each wall would be essential.

   b. Listening Stations

To be equipped with:	Tape recorders, earphone and electrical outlets to accommodate this equipment

To be built free-standing and back-to-back, each side accommodating three or four students; partition dividing the stations horizontally to be well above eye level and each station back to have a shelf upon which study guides, papers, notebooks, pencils, etc. could be kept. Each listening station should, of course, have a chair and a counter-desk upon which the student can do the correlating written work.

c. Independent Reading Materials Center

To be equipped with:	SRA Reading Laboratories Study Skills Libraries Various Reading Exercise Books A stop watch A three-minute clock timer
Furniture to include:	A free-standing counter with open shelves below to be used for the storage of above mentioned instructional items and for a room divider to separate this center from other centers in the room; two or three library study tables and chairs

d. Book Display Areas

Under-window areas equipped with built-in window-height bookshelves; corners of rooms, where practical, equipped with 6' to 8' high bookshelves

e. Small Group Instructional Areas

To be separated from other centers by 6' to 8' high dividers on castors, one side of which would be fitted with shallow shelves for the storage of instructional materials in use, and the other side to be fitted with bulletin boards or chalk boards.

Furniture to include: one round table and four to six chairs per area

f. Testing Area

Closed off and made virtually soundproof by the installation of carpeting on the floor and two walls hung with monks cloth

To be equipped with a vision testing machine and an audiometer for the testing of hearing

Furniture to include: One small table and a comfortable chair for the examiner and another for the examinee. Counter-top shelves along one wall for tests and forms for diagnostic reading evaluation; counter-top to be used for storage of machines. Two electrical outlets per wall would be essential.

g. Teacher's Office

To be equipped with: Teacher's desk and desk chair
Four-drawer filing cabinet
Typewriter and stand
Storage cabinet - equipped with movable shelves to accommodate different and odd-sized instructional materials.

Half-plexiglassed (or some material which permits visibility, but will not shatter on impact) walls on two sides might be desirable to facilitate teacher observation of the room and to create a feeling of teacher accessibility.

Committee:

Helen Wiegman

EDUCATIONAL SPECIFICATIONS FOR
SCHOOL FOOD SERVICE

Statement of Philosophy

School lunch learning opportunities extend beyond the physical benefits of the actual consumption of food for the present. These learning opportunities in nutrition education instill and encourage better dietary habits into adulthood. In addition to nutrition education, the school lunch department can be used to supplement classroom teaching of subject matter. The educational possibilities should be taken into consideration in making new buildings physically comfortable and aesthetically inviting.

General Objectives of Program

1. To make available to every child a complete lunch which meets one-third of his recommended daily nutritional allowance

2. To provide other nutritional food services as necessary to maintain good pupil health and welfare

3. To provide the opportunity for children to experience food varieties

General Authority

Florida statutes provide that "The state board shall adopt and prescribe all needful rules and regulations for the proper enforcement and carrying out of the provisions of the school code." On this authority "school lunch facilities should be planned to conform to accepted standards as outlined in School Lunch Design Criteria published by the Florida State Department of Education."

School lunch facilities are also subject to the requirements of the Sanitary Code of Florida. All facilities should be planned for the ultimate enrollment based on current survey information.

Functions to be performed, space and equipment necessary to perform these functions, anticipated future changes, special considerations such as utilities, relationship of functional divisions of space; all should be considered.

Specific recommendations for materials and equipment needed will be found in the Florida State Department of Education Bulletin, School Lunch Design Criteria, 1965.

Special Considerations

Kitchen facilities frequently serve purposes other than serving a noon meal. They are used for emergency feeding during natural disasters, civil defense shelters, Head Start programs, day camps, summer enrichment programs, vocational education centers for teaching quantity cookery, and special school functions. The use of the department should determine the adaptation necessary to meet all requirements.

Specific Recommendations

Junior and Senior High Schools

1. The dining area should be planned for flexibility of use, but a cafetorium is not recommended. The multi-purpose room could be used for study hall, small conferences, large group instruction (TV).

   A dual lighting system is desired in the event that the room is used for study purposes.

   It is recommended that provision be made to divide the space into several smaller areas by use of sound-retarding folding or sliding partitions.

2. If the student line is in the dining area, it is recommended that ceramic tile be used on the wall to the height of five or six feet. This will ensure a more attractive dining area, eliminate painting up-keep, and facilitate cleaning.

3. Seating in the dining area should be provided for one-third of ultimate enrollment, as this count has a closed noon hour. (Example 1500 enrollment - 500 seats). This will require more square footage in the dining area than recommended in "Design Criteria."

4. The dining room must have a display area (bulletin board.)

5. Two serving counters should be planned in dining rooms seating more than 250. In schools with enrollments of 1500 three or four counters would be desirable. (Perhaps two could be portable.) When high school students have to stand in line more than half the noon hour, participation declines.

6. Serving Counter Order

Trays & Silver	Milk	Hot Foods	Cold Foods	Cashier

   The tray unit should be mobile. Mobile units will be used for plates. Provision should be made for storage of mobile plate unit under the serving counter. Heated food tables are not needed.

7. The dish return area should be located so as to prevent cross-traffic. Ceramic tile should be used in this area. Two dish return windows should be provided when more than one serving line is used. Chutes for silver and paper are desired.

8. Quarry tile is preferred for the kitchen floor with ceramic tile for walls to a height of approximately six feet.

9. A walk-in refrigerator should be built-in as part of the building contract.

10. The kitchen should be planned and built for ultimate expansion.

11. Small lockers in employees lounge should have keys so that personal belongings may be left there. Space should be provided in lounge for hanging coats and clothes.

12. Exit doors must have adequate protection for screens.

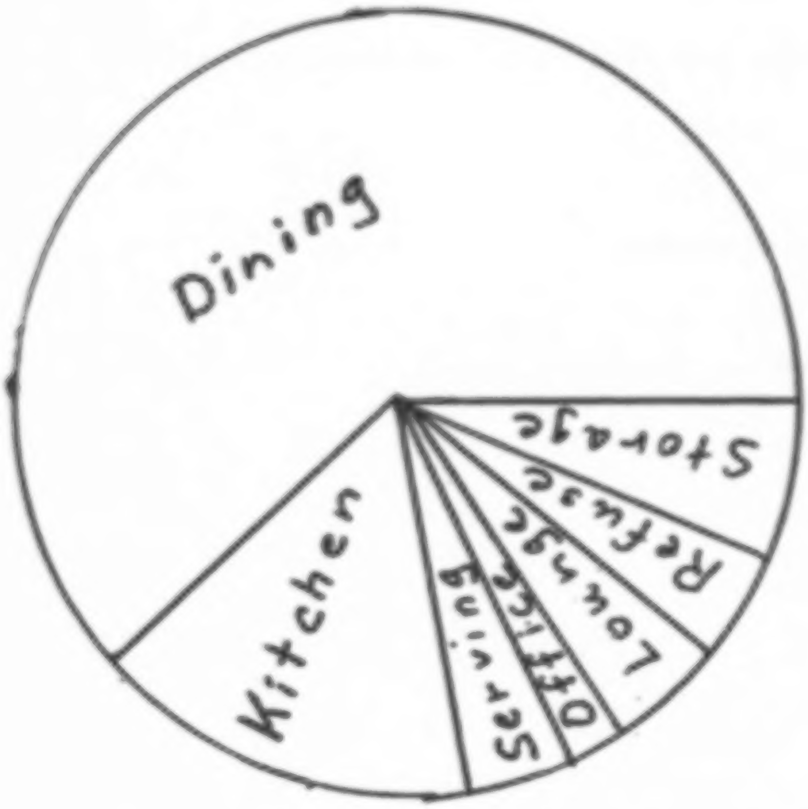
13. All counters and sinks must be stainless steel.

Committee:

Reta Matthews, Chairman
Joe Hudson
Paul Locke
Tommy Tomlinson
Harriet Hennessey
Hilda Lynn
Nellie Grant
Reta Milliner

Space Relations

Dining Area	60%	
Kitchen	20%	(This includes dishwashing and refrigeration)
Serving	7%	
Office	1%	
Lounge	3%	
Refuse Area	2%	
Storage	7%	



EDUCATIONAL SPECIFICATIONS FOR SCIENCE

Introduction

The significance of science in practically every human endeavor is evident and accepted in today's world, and the future holds promise of even greater emphasis of science on civilization. Knowledge, understanding, and appreciation of science are essential to all functional members of the society we know. Not only are individuals dependent upon the scientific enterprise, but our nation's security and economy are inextricably involved in science.

American secondary schools must provide science experiences that will assure that young citizens develop attitudes, understandings, and abilities which will enable them to live and function effectively in the evolving scientific and technological society.

A look at the science program as it exists and as it is apt to develop reveals a many-faceted and rapidly changing scene. The knowledge explosion, which seems to be due largely to developments in technology, has demanded more intensive investigations into the nature of science. These studies have had ramifications in the form of new science courses and drastic changes in the science educational process. Since science education is obviously involved in a state of flux it behooves educational planners to acquaint themselves as well as possible with developments and to plan facilities accordingly. At best, it is difficult to anticipate future needs, so the key to wise planning lies in flexibility of design and adaptability of facilities.

Objectives

There are several purposes or objectives that should be stated in a consideration of the science program in Alachua County. It is expected that students who participate in the science program will:

1. Acquire the attitudes, understanding, skills and abilities necessary for successful participation in advanced studies in science.

2. Become aware of individual citizenship responsibilities and personal relationships to the physical environment.

3. Obtain an understanding of science principles that will assist in preparation for industrial employment.

4. Understand and appreciate the role of science in a technological society.

5. Perceive the relationship of science and technology to socio-economic and political problems.

Descernible Trends

Current developments give evidence of the following trends in science education:

1. Greater emphasis on laboratory experiences and activity centered instruction.

2. Accent on understanding of concepts and principles rather than factual information.

3. Utilization of flexibility in group sizes and time schedules as they relate to student activities.

4. Increased cooperation between science and mathematics teaching personnel.

5. Greatly emphasized use of audio-visual aids.

6. More emphasis upon the quantitative nature of science.

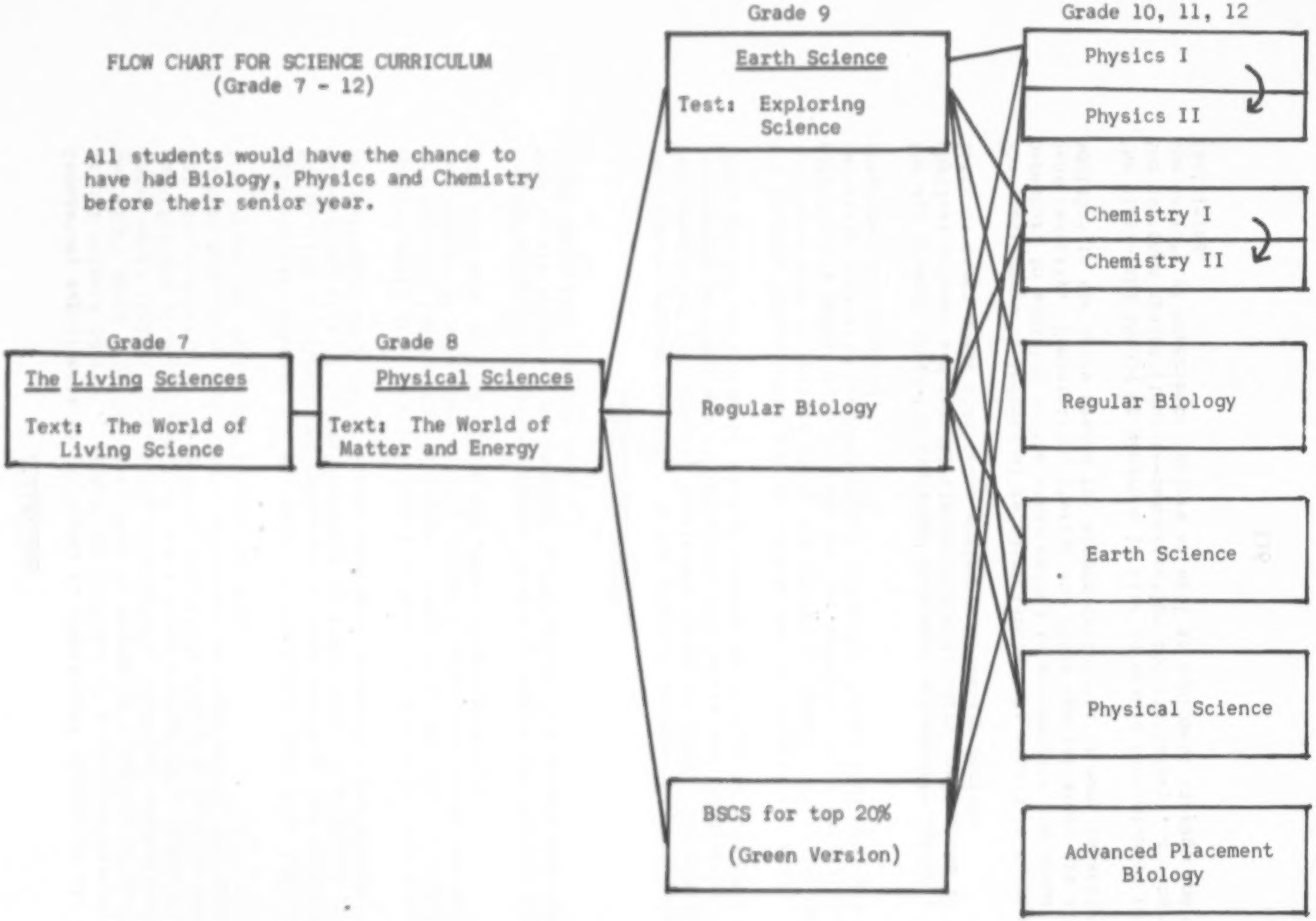
7. Increased use of laboratory instrumentation.

Program

Present course offerings in Alachua County High Schools and 7th and 8th grade science include traditional and contemporary biology, chemistry and physics courses in various levels of academic difficulty according to the students enrolled. In addition, a physical science course is provided for non-college bound students, a senior level offering for science-prone students who have completed the typical sequence in an accelerated fashion is also available in some cases. The sequences that various students may follow through the program are illustrated in the flow chart which is on the following page.

FLOW CHART FOR SCIENCE CURRICULUM
(Grade 7 - 12)

All students would have the chance to have had Biology, Physics and Chemistry before their senior year.


Grade 7
The Living Sciences
Text: The World of Living Science
Grade 8
Physical Sciences
Text: The World of Matter and Energy
Grade 9
Earth Science
Test: Exploring Science
Regular Biology
BSCS for top 20%
(Green Version)
Grade 10, 11, 12
Physics I
Physics II
Chemistry I
Chemistry II
Regular Biology
Earth Science
Physical Science
Advanced Placement Biology

Activities

Laboratory experiences are included as significant aspects of all the high school science courses. Within the confines of a class-laboratory, a normal sized group (25) should be able to engage in a variety of activities. These would include total group discussions, lectures, demonstrations and use of audio-visuals as well as small group conferences, demonstrations and use of materials. Laboratory facilities should be readily available so that transition from verbal activities to experimental and manipulatory activities can easily and rapidly be made.

Facility arrangements for multiples of the basic class size will enable the pooling of talents and resources in team teaching, use of educational television, etc. It seems desirable to limit such large groups to 150, and multiples of 2 and 3 classes seem more acceptable and workable.

Special small groups or individual students will need to have access to semi-private laboratory facilities. These areas may need to provide for experiments of more than a class period's duration. Study and reference work will also be done within the basic class-laboratory.

A planetarium is needed in Alachua County to enrich the science instruction in all schools. An adequate installation in a modern high school could serve this purpose well.

Space Requirements

The science program described in the previous section suggests several requirements of the physical facilities to be provided. The number and arrangement of rooms and laboratories, the nature and location of furnishings, and the provision of special purpose areas will be presented here.

The biology laboratories should provide for 25 students per class. Storage facilities in science areas are always in demand. These should be particularly generous to provide for the multiplicity of apparatus and materials presently used and should allow for future equipment yet to be developed and acquired.

The all purpose class-lab described here must accommodate not only the physical science and special classes but will carry an overload in chemistry or other areas that occur during a particular period.

The small group or individual research laboratories should be considered necessary in addition to the areas needed to accommodate the normal student capacity. Preparation, storage and other special areas are also in addition to the space needed for accommodating the student capacity.

The class-labs should be generous in size to enable each student to have two assigned spaces (lecture-demonstration and laboratory), and to provide the variety of experience centers as well as equipment storage and display facilities.

There are many special features that should be incorporated into the science facility to increase its efficiency and enhance its function. These are briefly described in this section.

It is assumed that the total school will be properly air-conditioned, climate controlled and acoustically engineered. Two or three aspects of these important features are particularly significant in the science area. The student activity in a laboratory is naturally prone to the production of more noise than the normal classroom teacher expects. Since carpeting is impossible in laboratory areas, other means of containing this noise must be considered. Caution should be exercised, however, since part of the class-lab is to be used for lecture and discussion and possibly two or three of these areas are to be expandable into large group instructional areas.

The physics class-lab and the all-purpose class lab should have individual means of controlling humidity since various electrostatic experiments require arid conditions. The chemistry class-labs and all-purpose class-lab need to have much more than the normal exchange of air volume to avoid the accumulation of obnoxious gases and odors. Of course, this air flow should be separate from the normal circulation to assure that chemical odors do not permeate the school. All laboratories and preparation areas need to be equipped with ducts for connecting portable fume hoods.

The laboratories and the storage and preparation rooms should have acid proof tile floors. All other areas of the science facility (discussion areas, offices, hallways, conference rooms) should be carpeted. The preparation rooms and laboratories should be equipped with emergency showers and floor drains.

Laboratories and preparation rooms need to be equipped with 220 volt electrical service for heavy duty heating apparatus. Lighting should be rheostat controlled so that greater than normal intensity to total darkness can be supplied over all student work stations in all classrooms. Arrangements for master cut-off valves and switches in teacher demonstration desk for teacher control of all utilities at student stations should be made.

Light control facilities for making effective use of AV materials and equipment should be made very convenient by the design of each class-lab. The class-labs should be wired for receiving and initiating closed circuit telecasts.

The use of outdoor features should be incorporated into the building. For example, astronomy and meteorology require outdoor installations. A 10 - 12 foot stable and level circle should be provided on the roof of the planetarium or on a patio for the mounting of telescopes. An accurately installed sun-dial should be nearby. This same area could provide additional paved space for installing weather instruments. These outdoor plans should utilize any natural feature of the site (pond, trees, geologic formations, etc.) that might complement the science program.

The library certainly ought to be the center of focus for the school. The total science facility should be adjacent to the library and, if possible, near the mathematics facility as well. Storage facilities and teacher offices should be easily accessible from all science class-labs. The class-labs themselves can be situated in clusters of three which could be expandable into large group areas.

Science Specifications for Junior High School

I. General Specifications for any Junior High (grades 7,8,9) School Room (Special Specifications will follow these items)

  A. Room

    1. All science classrooms should be 1/3 larger than normal classroom.

    2. Tables and chairs should be mobile except where specifications indicate otherwise.

    3. Should have air conditioning

    4. Place two rows of one inch eyelets in ceiling (each row should contain six eyelets, three feet apart, to hang pendulums, etc. supporting 50 to 100 lbs. with at least 2 eyelets supporting 200 lbs. These two rows of eyelets should be down the center of room, at least 6 ft. apart.

    5. Fire fighting equipment

    6. Clock in rear of room with second hand

  B. Demonstration Table (3' x 6')

    1. Should be elevated and have beveled at an angle formica tops, no metal edges, - on a platform 8 inches high, 2 ft. back and sides, so that those in the back row can see. Demonstration tables should have 4 3/8 inch threaded sockets set flush in the table on right hand side of table, 2 rows of 2 each, 3 ft. between rods.

    2. Sink, 18" x 18" x 18" deep, with dual spigots opposite end of table from rod mounts

    3. Dual gas jets

    4. Two dual electrical outlets in center of table on instructor's side. Place outlets on side of table, not on top. DC power supply should be located in the table, plugs different for AC and DC.

       Use of batteries in laboratory would be almost eliminated, thus considerable money saved over long period of time when variable DC power supply is provided for student work area and controlled through teacher's demonstration. Safety factor is also of importance.

5. Adequate storage space beneath sink - 32' high x 24" wide - no shelves

6. Adequate drawer space

7. Threaded adaptors for ring stand rods - (place 2 rods every 2', equidistant from edges of desk - permanent fixture in top of demonstrators' desk)

8. Exhaust fan above demonstration area (at least 12 inch-check)

C. Chalkboards - Bulletin Boards - (all chalkboards to be in blue or green)

1. Two adjoining chalkboards behind demonstration area, equipped with hanging devices along upper rim for charts, etc. - front metal boards to be sliding

2. Side wall should be all bulletin board, 24" wide and above work table

3. Back wall should be all storage area; display cases and science project storage area. 6ft. x 24" enclosed with plexiglass

D. Student Work Area

1. Work tables on both sides of room about 24" wide and 36" high with formica tops

2. 6 sinks per side, chemical resistant - 14" x 14" x 14", cold water

3. 6 dual electrical - 6 AC outlets, 6 DC outlets in wall, 12 per side of room. Different plugs for AC and DC. Both #2, #3 and #4 spaced evenly down sides of room. Location of power supply for AC and DC come from demonstration table with master switch at that table. All wiring for DC should be done with No. 10 wire. Variable power supply should be maximum of 10 amps and the voltage variable from zero to 500.

4. 6 dual gas jets per side of room, master gas cut off in demonstration desk

5. Storage area below work area (cabinets should have locks on them - they should be 24" x 36" with movable shelves - one cupboard for vertical storage - slots 6" wide.)

E. Audio-Visual Needs

1. Large, 8' x 8' pull-down screen suspended from ceiling, front center of room for movie and overhead projector use. Wall

opposite screen to have electrical outlets (two). Have an 8 to 12" speaker mounted in wall on one side of screen, above chalkboard, with outlet jack in back of room.

2. Blackout curtains, some experiments require complete darkness.

3. Display cabinets in back of room - sliding plexiglass fronts, 4 or 5 ft. wide, 18" deep with movable shelves

F. Equipment Room - located in center of Science classroom complex be pod, cluster or multi-story type. If multi-story, provide dumb waiter.

1. A large area for storage cabinets - ½ size of regular classroom

2. An area for experiment set ups - a counter, 15' long and 24" wide with formica top, sink, 4 gas jets, 4 AC and 4 DC type electrical outlets, work area for all science teachers.

3. Fire fighting equipment

4. Half plexiglass door opening into classroom, also door to hallway

5. Area should have refrigerator - 14 cu. ft.

G. Teacher's Office Area

1. Large enough for teachers' carrells and a large work table with several chairs

2. Wall bookshelves

3. Steel 4-drawer file cabinets (lock type) for each teacher

II. Special Science Specifications for Junior High Life Sciences (either BSCS or Regular Biology)

A. A project area in addition to regular science classroom for students to carry out experiments beyond the regularly assigned work (storage for individual experiments 10' square with adjustable shelving)

B. A life alcove or walled area in addition to regular classroom set aside for the raising and care of plants and animals both aquatic, and terrestrial. This area should be large (20' sq.) enough for elbow room for at least ten students. Temperature and humidity control in this facility are essential. Provide an outdoor, fenced area approximately 20' sq. Provide space for a drying oven in the alcove.

C. Specially built storage compartments for microscopes, mono and binocular; refrigerator, kitchen range, autoclave or pressure cooker, several balances which are sensitive to 1/100 gram, one or more incubators, wide selection of glassware, rolling table or laboratory cart, book cart, portable blackboard, wall charts.

Science Specifications for Senior High School

I. General specifications for Senior High, grades 10, 11, 12 Science rooms (the following material would need be located in every science room - regardless of the subject.) Same as Jr. High.

A. Room

1. All rooms should be 1/3 larger than normal classroom.
2. All tables and chairs should be mobile except where specifications indicate otherwise.
3. All rooms should be air conditioned.
4. Place 2 rows (each row with 6) hooks in ceiling (see Junior High specifications).

B. Demonstration Table

1. Should be elevated platform so that students in back can see.
2. Sink with dual spigots
3. Dual gas jets
4. Two dual electrical outlets (one for AC 110V, the other for variable DC power supply)
5. Adequate storage space beneath sink
6. Adequate drawer space
7. Threaded adaptors for ring stand rods (placed 2 every 2 ft.)
8. Exhaust fan above demonstration area

C. Chalkboards - Bulletin Boards

1. Two adjoining chalkboards behind demonstration desk, equipped with hanging devices along upper rim
2. Side wall should be mostly chalkboard with some bulletin board.
3. Back wall should be all bulletin board.

D. Audio-Visual Needs - See Jr. High

1. Large - "pull-down" screen for movie and overhead projector use

2. Blackout curtains, some experiments require complete darkness.

3. Display cabinets in back of room

E. Teacher's Offices - See Jr. High

Special Specifications for Senior High

I. Special Specifications

A. Chemistry

1. Between two chemistry classrooms there should be a laboratory.

2. The laboratory should have "stand up type" counter top work areas, formica tops with sinks at each end, gas jets and water spigots.

3. The laboratory should have a large exhaust fan.

4. The laboratory should be lighted with fluorescent lights.

5. The laboratory should have adjustable shelving, a large 20' sq. equipment room (for chemicals and lab equipment) ventilating fan, chemical resistant floors and wainscoating.

6. Each chemistry room should have a small storage area and lab "set-up" room next door.

7. Lab and classrooms should have proper fire fighting equipment.

B. Physics and Physical Sciences

1. Between the Physics and Physical Science rooms there should be a laboratory.

2. The work tables should be the island type for two students with five or six drawers 6" deep down middle of desk.

3. Laboratory should be designed for 36 students.

4. Desks should be equipped with threaded adaptors for ringstands.

5. There should be a large exhaust fan in laboratory.

6. There should be a large 25' sq. (see sketch) equipment room - physics and physical science equipment can be very large, therefore, both room and cabinets should be constructed with this in mind.

C. Biology and other Sciences - see Junior High Specifications for details.

1. These rooms should have work areas along both sides of room.

2. These work areas should have sinks, gas jets, and electrical outlets.

3. Storage space should be provided below sinks.

4. This biology area should have same special recommendations as life sciences and BSCS program in Junior High

D. Tables in biology room to be prewired so that they can be plugged into an AC outlet located at base of side work areas, evenly spaced, 3 dual AC outlets per side of room.

Committee:

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Rozella Kasler
Frances Fabrick
Vickie Marsh
Roberta Taylor
Jean Shires

EDUCATIONAL SPECIFICATIONS FOR SITE PLANNING

Today expressways and highways have made it possible to transport about 30 percent of the pupils to schools. Ready transportation facilities make it possible to establish schools of the most efficient and economical size for the educational programs. Such schools are usually established on the periphery of expanding population areas. The expansion of the numbers of highways, and the increase in traffic on them make it important for highway traffic hazards to be appraised and school sites and access routes carefully planned for the maximum safety of the pupils.

The utilization of land has moved toward residential, commercial, and industrial purposes. These changes in the uses of land have brought about and made possible tremendous growth in population which has in turn created a need for many more schools.[1]

Perhaps a competent real estate procurement officer employed as a consultant on call, should be charged with the responsibility of coordinating land acquisition in terms of need defined by the research presently in progress of projected school enrollments, population shifts, and needs for school facilities. He should have the responsibility for developing a program for locating and acquiring school sites prior to need under policies of the Board of Public Instruction. His responsibilities may include locating possible sites, comparison of site possibilities, establishing values, negotiations, obtaining approval of the local board and the state department of education, and working with the school attorney to establish title warranty.

Experience has shown that the best solution to the problem of obtaining school sites of adequate size, properly located, and at a reasonable cost is for the school board to purchase property several years in advance of anticipated needs.

Coordination with Other Agencies and Interests

The efforts of the county school board in securing proper sites should be coordinated with those of other agencies concerned with land use such as the state road board, the county commission, municipal authorities, planning boards, zoning authorities, recreation departments, park boards, building developers of large projects, and other groups interested in the best land use for the preservation of human values. Many school boards have effected informal or legally required planning for the designation of school sites when plots of extensive areas for housing are being developed. Buffer zones to isolate schools from business should be owned by Board of Education.

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[1] Studies carried on by the Research Department of the Orange County Board of Public Instruction by Dr. Joseph Leps, University of Florida.

Cooperation with these and similar agencies will ordinarily prove helpful to all parties concerned and ultimately to the general public. Frequently the construction of school facilities on property adjacent to a park or recreation area or even on part of a large park will prove invaluable both to the school and general public through multiple use of certain facilities such as parking areas, playgrounds, and swimming pools.

In addition to the spot maps of pupil population and maps showing the location of existing schools and sites owned by the Board of Education upon which schools are scheduled for construction, the following maps can be secured for use of the site selection and acquisition department.

1. Topographic and geologic maps
2. Maps of master community development plans. Include buffer zones for schools
3. Maps showing various zoning areas; residential, business, industrial and others
4. Maps indicating types of dwellings in residential areas, i.e., single homes, apartments, duplexes
5. Maps showing location of proposed housing developments
6. Maps showing present and proposed transportation facilities
7. Maps showing location of parks, recreational, and residential areas
8. Maps showing location, size, and shape of undeveloped or vacant land
9. Land use maps of county and sections of the county
10. Aerial maps of pertinent parts of county where establishment of a school is anticipated

Selection of Sites

Site selection is primarily a technical and aesthetic problem, requiring cooperative efforts and special skills of school officials, architects, recreational experts, and legal consultants.[2] General criteria should be developed for the evaluation of all school sites and be made a part of the policies of the Board of Public Instruction. The architects and educators planning for a specific school would find it advisable to adapt or make the criteria sufficiently specific for the program planned and conditions found in the proposed school community. The general criteria would relate to adequacy of size, suitability of location, desirability of topography, and reasonable cost.

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[2] National Council on School Construction NCSC - Guide for Planning School Plants, R.F. Tonigan, Chairman. East Lansing, Michigan. Floyd G. Parks, 409 Erickson Hall, University of Michigan. 1964. p. 24.

A minimum of 40 acres should be provided for a secondary school program to provide space for the buildings, service areas, access roads, onsite parking, a variety of out-door educational use and playground areas and area for lawns, landscaping, and gardens. A larger site might in the long run prove valuable in terms of changes which may occur in the use of the land. Surveys and continuing studies of population and population shifts predict the general area in which schools should be established.

Secondary school sites should be located in a residential area near a park, or in a presently undeveloped area which can be zoned to protect the educational program. The site should not be located near factories, garages, filling stations, pool halls, liquor stores, taverns, or other undesirable neighbors. The site should enjoy freedom from odors, gases, dust, smoke, and noise. Possibility of traffic hazards from railroads and arterial highways should be considered.

The land should be well drained or economically drainable and the soil should be of satisfactory fertility to grow grass and shrubbery. Trees are desirable and natural beauty should be conserved. An elevated site is desirable since such a site has greater aesthetic possibilities. (Before a site is purchased engineering studies should be made to determine the nature of the soil and subsoil, and the type of foundations which would be required for building construction.)

The most economical practice in school site acquisition is to provide planning and acquisition procedures which permit the school board to purchase land in advance of rapid population growth in areas in which schools may be required. In evaluating the cost of a school site or in comparing the cost of two alternate sites, the school board should consider not only the original cost of the sites, but the cost of their development and maintenance. The cost of the site is generally a small part of the total cost of the completed school. Therefore, additional expenditures for a school site constitute a wise investment when necessary to obtain property adequate in size, appropriately located, and with desirable topographical and aesthetic characteristics. The site selected should enable the architect to design a school facility adapted to the program planned and having characteristics of which pupils and community will be proud. In the interest of good public relations, the value of the property should be determined by experienced and competent appraisers. Some school boards have adopted the policy of having the price of school sites established by friendly condemnation suits to eliminate any criticism of prices paid or procedures followed.

The Site Plan

When an architect has been selected for the development of plans for a new school, one of his first tasks should be to make a study of the school site and the preparation of a site plan to indicate how it can best be used. A check list for instructions to the surveyor has been prepared by the American Institute of Architects[3] for the use of architects who may be preparing site plans.

Building construction and land use should be coordinated in a plan for the development of the total school plant. The objective would be to provide a school plant which serves the purposes of the school, meets the specifications of the educational program, and is adapted to the community. Funds should show topographical features, utility lines, (underground if possible) adjacent streets and roads, and indicate the nature of adjoining properties. The plot plan should specifically locate grades, on-site parking areas, and their treatment, loading and unloading area for county school board or commercial vehicles which service the school, access roads, sidewalks, and other paved areas. The unloading and loading area for school buses and for private cars which transport pupils to school should be carefully planned to provide for the maximum safety of pupils. In some cases fencing with smooth, non-scratching surfaces should be planned to protect pupils from hazards on service areas or on adjacent streets or roads. Provision for safe efficient traffic patterns for pupils and adults as well as vehicles should be a major consideration. The arrangement of the facilities of the school plant should be planned in order to insure the most efficient pupil traffic pattern throughout the school day.

The characteristics of a good site plan include:

1. Provision for the maximum safety of pupils and others who use the school
2. Economy of space usage. A good plan will result in a minimum of wasted space. Multi-story, inside corridors and lockers with only one entrance and exit. Use gymnatorium rather than cafetorium. Every department should have a multi-purpose room.
3. The site functionally organized as a tool for the educational program whether the activities are within the building or out of doors
4. Functional relationship among building facilities and outdoor use areas. Certain areas for maximum convenience and utilization must be located to be easily accessible to corresponding indoor facilities. Ball fields for older boys should be far enough away from classrooms and the library to keep these activities from interfering with other school programs. Traffic patterns of the pupils during the daily operation of the school should be studied and the relative location of different facilities planned for orderly and convenient movement between facilities.

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[3] Handbook of Architectural Practice, American Institute of Architects, Washington, D.C., 1951. pp. 40-41.

5. Flexibility to meet changing needs. Some playground activities are seasonal. Planning in advance for shifting usage of certain game areas with a minimum cost should be considered. Central heating and air conditioning system in one location with built-in provisions where only those parts of building in use are climate controlled.

6. Attractiveness in overall appearance. Advantage should be taken of natural beauty, rolling lands, streams, trees, shrubbery, and other attractive features. The school building and the site should blend together to be pleasing in appearance and aesthetically gratifying.

Educational Use

School grounds are primarily for use in the educational program. The school grounds should be planned in terms of the educational specifications for outdoor educational use (physical education, band, agriculture). Current trends are for greater utilization of the site by both school and community and more acreage per school.

Science and nature study, pageants, musicals, dramatics, and other activities often may be desirable as out-of-door programs when the site has been selected and planned for these purposes. Many well organized school sites are planned for use in summer programs. In the preparation of educational specifications for the site, participation of interested representatives from the community is frequently productive of good ideas, interest, and cooperation.

The foremost consideration is to have the school site organized and equipped for the outdoor activities of the school program including physical education and recreation. There should be a logical grouping of the areas according to the ages of the pupils and the location of the classrooms for each age group.

Landscaping

The architect or landscape architect should plan carefully for the location of lawn areas, shrubbery, gardens, and trees to be saved. Trees are one of the most important elements in the landscape.

Lawns are a major feature in any landscape design. Sandy playgrounds without lawns or surfacing erode in the wind under the heavy usage of children. Lawns keep down the dust, contribute to health, and save building operation and maintenance costs. Grass is a good natural air conditioner. Temperatures over sandy or paved areas will run 20 degrees higher than over lawns. Grass is one of the best glare reducers and lawns control sound level desirably. The soil should be prepared for supporting a good lawn and planting started early on that part of the site which will not be disturbed by construction workers. Proper drainage, a good mixture of humus top soil, and judicious fertilizing are necessary for establishing a good turf. Argentine Bahia has proved very satisfactory for establishing a turf which will withstand rugged use. This grass has been tested for use as pasturage, on the sides of highways, and on many school sites.[4] Improved Bermuda and other lawn grasses have been used successfully.[5]

Shrubbery and gardens should be planned as a part of the landscaping to enhance the beauty of the site, to serve as boundaries for specific areas, to obscure unsightly vistas, and to lessen the distraction of noise or fumes from nearby traffic. Shrubbery should not be located in such a way that it interferes with physical education or other programs. Shrubbery should not be too close to the foundations of the building nor be allowed to obscure light from the windows.

Committee:

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[4] Edited and approved by Dr. Granville Hern, Professor of Horticultural Pathology, College of Agriculture, University of Florida.

[5] Facilities for Physical Education, Bulletin, Op. cit.

EDUCATIONAL SPECIFICATIONS FOR SOCIAL STUDIES

Statement of space needed in relation to number of pupils taking Social Studies courses.

7th grade - Geography

All 7th grade pupils take this course

8th grade - United States History to 1877

All 8th grade pupils take this course

9th grade - Either Civics or World History

Depending on the course of study in individual school, some or all of the pupils take this course

10th grade - World Cultures

Approximately one-half to two-thirds of 10th graders take this course

11th grade - American History

All pupils in 11th grade take this course

12th grade - Elective courses of one or two semesters

In most schools in this county, approximately two-thirds of the 12th grade pupils take social studies courses

I. Objectives

A. General philosophy

The most inclusive aim and objective of social studies as a part of general education in the United States is to help young people learn to carry on the free society they have inherited, to make whatever changes modern conditions demand or creative imagination suggests, that are consistent with our country's principles and values, and to hand on to their offspring a society which is better than the one they experienced.

B. Specific Objectives

1. Skills

a. To develop skills in problem solving and in critical thinking.
b. To develop skill in interpreting maps, globes, pictures, statistics, and graphs.
c. To develop skill in using time concepts and handling sequence and chronology.
d. To develop skill in reading social studies materials, including the printed page and visual symbols as presented by tables, graphs, pictures and cartoons.
e. To develop skill in locating and gathering social studies information.
f. To develop skill in organizing and evaluating social studies information.
g. To develop skills in communications
h. To develop basic skills in the research approach to the various social sciences.
i. To develop skill in working with others in the solution of common problems.
j. To develop skill in making sound generalizations.

2. Understanding and Knowledge

a. To develop an understanding of the cultural heritage of the United States, Western Civilization, and the world as it bears on our culture.
b. To develop an understanding of other countries in the world today; their natural resource bases, how their people live, and their roles in international affairs.
c. To develop an understanding of the students' own city, county, state, and nation, geographically, economically, politically, and socially.
d. To develop an understanding of international affairs, including international organizations, international politics, foreign policies, and the interdependence of peoples and nations.
e. To develop an understanding of the responsibilities of citizens for working together in a democratic society and the qualities needed by an individual who carries out successfully such responsibilities from the family through the international level.
f. To develop an understanding of the basic nature of social science including the methods and role of social scientists.
g. To develop an understanding of the nature of social change.
h. To develop an understanding of the moral and ethical standards which are part of the foundation of the way of life of our country.

3. Attitudes, Appreciations and Values

a. To develop appreciation of the achievements and ways of living of other people -- an appreciation of the individual, the way he lives, and his goals.

b. To develop strong and solid pride and loyalty to our country, based on our cultural heritage and an understanding of our current scene and values.
c. To develop a willingness to assume citizenship responsibilities and participate actively as a knowledgeable and informed citizen.
d. To develop an appreciation of the social sciences.
e. To develop an awareness that social problems are susceptible to rational analysis and solution.
f. To develop a desire to pass on to future generations a better society in which to live. This includes a desire to live harmoniously with change.

II. Teaching Aids required in Class, in Small Groups, and in Individual Activities.

A. Materials

1. Reading materials (These materials should be in addition to library materials - not to replace them)

a. Books - should be available on various reading levels instead of only a single textbook
b. Magazines - should be in adequate numbers for class use but again not replace library materials
c. Reference books - basic reference works should be available in classrooms

2. Programmed materials - use should be considered when appropriate materials are available. Provide plugs 24" to 30" high for future equipment

B. Instructional equipment in each room

1. 16-ft. linear chalkboard. Material the same as in the math rooms in Gainesville High School

2. One full tackboard wall. The lower edge should be 4'3" from the floor in order (a) that everyone may see material on the board and (b) that book shelves may go underneath (see II, C, 8 below)

Note: Also a tackboard described in the note under Section III, C below

3. Map rails at the top of both chalkboard and tackboard, for maps, noviex screens, etc. (map rails on two sides of a room if possible)

4. In addition to the map rails, 2 strips of wood should be installed approximately 7½ feet high and 8 feet long in at least two corners of the room for attaching screens, pictures, etc. which will not slide onto the map rails.

   Note: A screen for an overhead projector should be placed near a corner of a room instead of in the center of a wall space.

5. Globe on a mobile table*

6. Overhead projector on a mobile table (these rolling tables may also be used for movie machines, record players etc. See section III, B for storage space for these rolling tables.

7. Provision for closed circuit T.V.

8. Recessed wall niche with sliding cover panel, 5' from the floor to be used for T.V.

9. Two double, covered electrical outlets in the floor near the center of the room (if possible). Use for AV equipment such as movie projector, film strip projector, slide projector.

10. Electrical outlets along two (opposite walls if possible) walls every 4 feet

11. Provision for dimming lights

12. One single wet carrel and one wet carrel for two persons

C. Furniture in each classroom

   1. Carrels (See Section II, B, 12 above)

   2. 30 movable chair desks

   3. 10 straight chairs (use with carrels and tables)

   4. "Lectern desks" to replace standard teachers desks
      Top of lectern desk 18" x 40".
      Height: 3'8"
      Tilt top with 1" rail on lower edge
      Open shelves down one side
      24" high stool for teacher to use as relief from standing

*Investigate new type slides which might be more durable than wheels on all mobile tables, bookcases, magazine racks.

5. Two 5-foot tables for committee work; one of these tables with folding legs (see III, A below)

6. 4-drawer filing case, for student teacher use also

7. Bookcases 8½ inches deep under the chalkboard for paperback books etc. Adjustable shelves. Could be recessed and built in

8. At least 4 bookcases, with adjustable shelves, 40" to 48" high, 3½ 2' to 4' wide, mobile (wheels or slides) for rolling out and making partial temporary partitions between small groups. These could be along the wall under the tack board wall.

9. 2 magazine racks 4' high and not more than 15" deep at the floor, slots for magazines, mobile (See seciont II, C, 8 above)

10. A newspaper rack

III. Space, and use of wall space in the classroom

A. The size of the classroom shall at least meet minimum state standards, and shall have,if possible, acoustical flooring.

B. Space against the wall for

1. the two carrels (see section II, B, 12 above)

2. the two small mobile tables (see section II, B, 5 & 6 above)

3. a slot or recessed place in wall for storing the 5-foot folding table (see section I, C, 5 above)

4. the 4-drawer filing case (see section II, C, 6 above)

C. Movable wall between adjoining classrooms, in a cluster, allowing for using 4 classrooms as one, or combining 2 or 3 classrooms or 4 classrooms.

This is in addition to large group instruction room specified elsewhere in this document

Panels of these movable walls should push into recessed slots or should, when removed, not interfere with acoustics. (Note how acoustics are very poor in Gainesville High School teaching auditorium classrooms when these are thrown together, because the walls still extend into the double room.

Note: The firm in Bradenton makes this removable wall with the panel finish such that panels may be used as additional tackboard - or as the main tackboard space.

IV. Space, Area, and Rooms in Social Studies Area

A. As part of, or adjacent to the multi-purpose workroom (see section IV, B below), there should be a private conference room, 6' x 8', with electric outlet, small table, and four chairs.

B. Multi-purpose workroom 30' x 30' (900 sq. ft.)

1. 10 teacher carrels containing a desk, a 4-drawer filing cabinet, and a bookcase 5 feet high, 4 feet wide, adjustable shelves in bookcase

   To provide visual privacy, could use bookcase as divider between carrels

   Provide good lighting over desk in each carrel

2. Storage space, perhaps 10 cupboards, perhaps 5 of these back to back to the other five in the center of the room. Adjustable shelves

3. Cupboard or closet for 10 teachers for coats, umbrellas, purses. Shelves down one side; rod for coat hangers

4. One bookcase, 4' high, 3' wide, adjustable shelves for professional library for use of all the social studies teachers.

5. Two 5-foot tables to assemble materials and to plan together

6. Lavatory, with 4-foot long work space on each side. Depth, 18", vinyl top, cupboards underneath

7. A screen (the regular wall, painted a light color is sufficient) for previewing movies, film strips etc.

8. Electric outlets every 3 feet on two walls

9. 12 vertical or horizontal space (slots?)
   4" wide x 6"   72" for storing maps
   (recessed?)

10. 2 comfortable chairs; 7 to 8' lounge bench

C. Pay telephone booth just outside workroom

D. Classrooms in clusters of four

V. Social Studies space in relation to the remainder of the school

A. Area should be adjacent to the library

B. Area should be adjacent to the central visual aids resource area

C. Area should be adjacent to large group instruction room(s)

Note: Special consideration should be given to provision for taping commercial or educational TV programs for school use.

Committee:

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Cornelia Hanna
Marian Buswell
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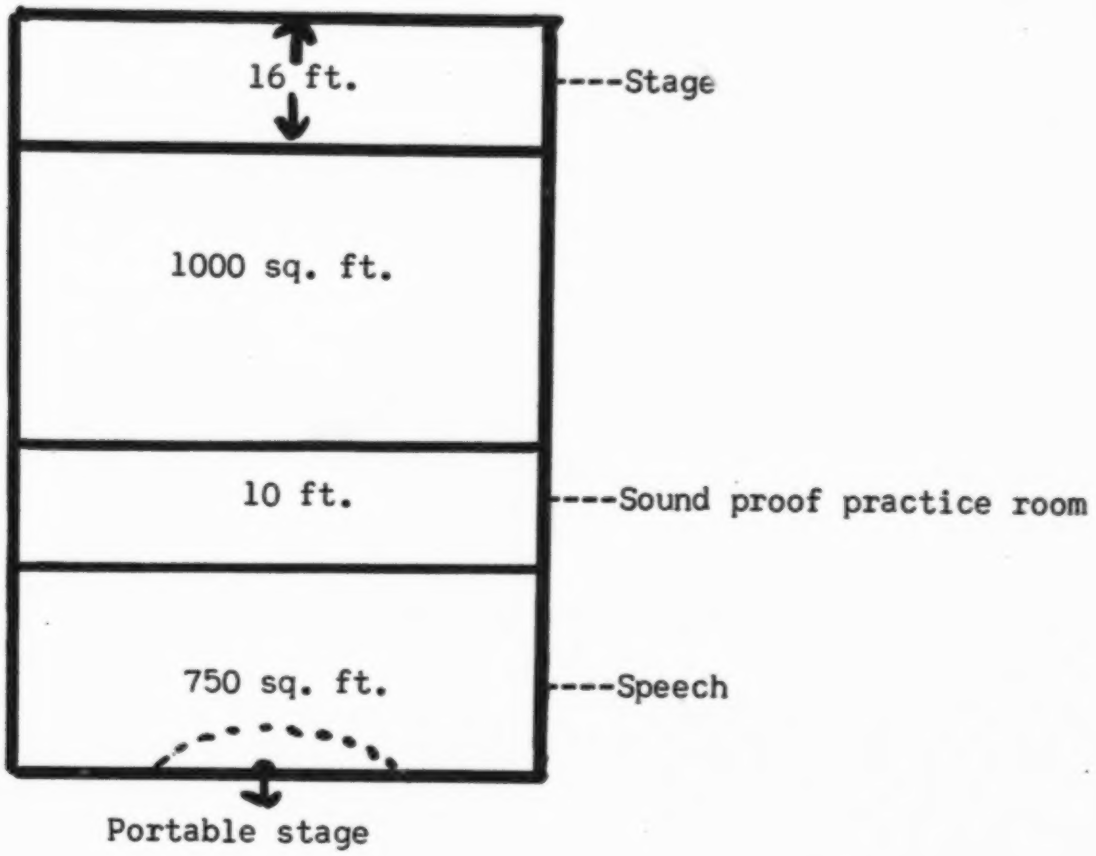
EDUCATIONAL SPECIFICATIONS FOR SPEECH AND DRAMA

The Speech Department recommends two rooms back to back but to be separated by sound proof practice rooms for use in recording, planning, etc. One room is to be 750 sq. ft. equipped with a portable platform. The other room is to be used primarily for dramatics and should be designed to include a stage the entire width of one end of the room. This would require a minimum of 1000 sq. ft.

The sound proof room divider should be paneled in glass or plexiglass so that the room could be supervised from either classroom. This room should be approximately 10 ft. wide.

The entire unit as described above should be a part of the auditorium suite or adjacent to it.

Each classroom should have book storage area as specified in English Classroom.



Committee:
Mary Elliott
Margaret Rhea

EDUCATIONAL SPECIFICATIONS FOR SPEECH THERAPISTS

Philosophy

We firmly believe that the purpose of education is to provide equal educational opportunities for all, based on individual ability. Therefore, we strongly support the belief that children with speech defects should also be given an equal opportunity commensurate with their individual abilities for wholesome development.

Objectives

General

To assist in providing administrators, teachers, parents and lay citizens with an understanding of the function of the speech therapy program as an educational aid for children who need it, and to encourage their support to promote it.

Specific

To adequately screen the school population to determine all children needing speech and hearing therapy.

To provide therapy sessions for as many cases as can adequately be scheduled.

To give the kind of therapy that will aid the speech defective in understanding his problem, correcting it, and providing practice exercises for improvement.

Ways of Work

After determining the particular speech defect of each child, the therapist works individually and/or with small groups of children who have similar speech defects.

Through the use of speech teaching devices, games and audio-visual equipment, the therapist works with a child or children to correct whatever speech defect may be involved.

Pupils may sit in small groups near the teacher for practice in sound repetition, voice control and articulation exercises.

They may also be engaged in quiet games and/or puzzle construction, painting, drawing, cutting and pasting, requiring large, flat surfaces.

Special Consideration

Room location: The speech therapist's room will be used by many different small groups of children throughout the day. Groups of six to eight children are usually served for a one-half hour period of time. This room should be placed so that traffic to and from the room will not be a disturbing factor to other classes.

Room should be free from outside interference and should be constructed with acoustical material on ceiling, walls and floor to reduce interior sounds.

Adequate electrical outlets for tape recorders, record players and film equipment, 2 or 3 outlets per wall.

Light control is important. Provision should be made to darken the room for showing films.

Locked storage space should be provided for tape recorder, record player, film machines, books, games and other teaching devices used by the therapists.

There should be adjustable book shelves for materials used by the children.

Needs

One round table suitable for six to eight children

Eight medium sized chairs for use at the table

Mirror for observing lip movements: size approximately 2' x 3'.

One small table for two people

Committee:

Lucy Beckum
Gladys Alexander
Earl Howell

EDUCATIONAL SPECIFICATIONS FOR VOCATIONAL AGRICULTURE

I. Objectives

A. General objectives

To give students training in occupations in Agriculture and the broad field of occupations related to Agriculture and Agribusiness.

B. Specific objectives

1. Give training in the production, marketing and processing of agricultural crops and livestock.

2. Give training in occupations related to agriculture and agribusiness.

3. Train students for a place in the labor market.

4. Train students in all phases of farm mechanics, i.e., metal working, woodworking, repair of farm machinery and farm buildings, construction of farm machinery and farm buildings, soil conservation, and the use of farm machinery and tools.

II. Description of Course Offerings

A. List of courses

1. Program orientation

2. Management

3. Animal Science

4. Plant Science

5. Soil Science

6. Agricultural Mechanics

7. Leadership

B. Description of course content, grade level placement:

8th grade agriculture - basic agriculture*

Agriculture I - 9th grade - Agricultural sciences*

Agriculture II - 10th grade - Agricultural sciences*

Agriculture III - 11th grade - Farm mechanics

Agriculture IV - 12th grade - Agricultural occupations and job placement

*This is the main area of emphasis. Farm mechanics instruction is also included.

Required electives:

8th grade Agriculture and Agri I - none

Agri II - required elective Agri I

Agri III - required elective Agri I

Agri IV - required elective Agri III

C. Planned changes in course offerings expand the Agri IV program.

III. Course Content and Activities

A. Unit outline of courses

1. Program orientation

The objectives for this section are to familiarize the students with the Agriculture Department and its program of instruction, and to give them a better understanding of the opportunities in agricultural occupations and related jobs

2. Management

The objectives of this instruction are to present an organized system of thinking to help students identify, define and solve problems by making maximum use of resources under their control. Through supervised agricultural experiences, at home on the farm, in the school, land laboratory, and in agricultural related occupations, skills of management will be taught, demonstrated and practiced.

a. Learning management principles
b. Making producer decisions
c. Securing and analyzing information
d. Planning and developing supervised farming program
e. Planning a progressive and continuous supervised program
f. Keeping business records

g. Using business records
h. Financing and expanding an agricultural program
i. Business methods and procedures

Modules - Organization of the Agriculture Department; Use of references; Importance of agriculture in our democracy; Careers in agriculture and related occupations

3. Animal science

The instruction in animal science should present basic information that pertains to the animal industry and to the principles of production of beef cattle, dairy cattle, swine, poultry, sheep, horses and bees. Specific examples and application of the instruction will be influenced by the situations prevailing in the local community.

Modules - Selecting and securing stock; Determining necessary equipment, facilities and environmental factors; Feeding animals; Prevention and control of diseases, pests and parasites; Preparing animals and animal products for show and exhibit; Reproduction; Care of offspring; Butchering, processing and identification of animal products

4. Plant science

The objective of the instruction in this section is to assist the student in developing basic understandings of plant science in order that he may be prepared to pursue training in the areas of production, processing, distribution, and service.

Modules - Classification; Morphology; Physiology; Propagation, Soil culture; Pests; Distribution; Regulations affecting plants and plant products

5. Soil science

The objective of the instruction in this section is to assist the student in developing a basic knowledge of the development of soils, the properties of soils and soil additives, and the management practices necessary for economy and continued productivity.

Modules - Origin and physical properties of soils; Chemical and biological characteristics of the soil; Soil classification; Soil management; Conservation

6. Agricultural mechanics

The primary objectives of instruction in agricultural mechanics are:

a. To familiarize students with shop tools and equipment
b. To learn materials and supplies
c. To encourage orderliness, planning safety
d. To familiarize students with maintenance requirements of mechanical equipment
e. To perform specific operative skills in the use of electricity, welding, plumbing, painting, carpentry, masonry and equipment repair

The classroom and the shop will serve as laboratories where the following basic skills can be taught:

a. Organization of agriculture shop
b. Agricultural mechanics tools and equipment
c. Materials and supplies
d. Preparing a working plan
e. Electricity
f. Fundamentals of welding and soldering
g. Mixing and using concrete
h. Agricultural farm and home plumbing
i. Selecting and using paint
j. Small gas engines
k. Planning and constructing small buildings

7. Leadership

The objectives of this phase of the instructional program are:

a. To develop an understanding of the common mental reactions between human beings
b. To develop an understanding of procedures for securing opinions and ideas of others
c. To learn to express ideas orally and in writing
d. To have a working knowledge of procedures that should be used in conducting and participating in group meetings
e. To learn how to influence others
f. To understand the structure and operational procedures of an organization

Modules - Fundamentals of leadership; Role of FFA and other organizations in leadership development; Securing and organizing agricultural information; Using correct parliamentary procedure; Presenting agricultural information through demonstrations and exhibits

General description of teaching and learning activities:

Classroom: Small grouping within the class, lecture, conference, individual study, demonstrations and group projects

Shop: Individual projects, group instruction and grouping of students

IV. Teaching Aids

A. Reading materials

1. Book shelves - 100 books

2. Paper rack - 5 papers

3. Magazine rack - 25 magazines

4. Four 4 drawer letter size metal file cabinets for bulletins

5. Notebook cabinet for 75 notebooks (9" x 12" size) per teacher (This notebook cabinet should be constructed on casters or made mobile; sized to hold 75 notebooks of 9" x 12" dimension, each such notebook to stand vertically in its own individual pigeonhole. The storage rack for graphs and charts might be a part of the notebook cabinet or not. This rack should provide for vertical (standup) storage of charts and graphs, each in its own pigeonhole. These pigeonholes should store charts and graphs of 30" x 30" size and smaller, thus various heights of pigeonholes are necessary.)

6. Storage space for graphs and charts

B. Programmed materials

Programmed materials for use in agricultural occupations, livestock selection and soil science

C. Visual

Film projector and filmstrip projector, overhead, screen, and curtains

D. Audio

Tape recorder for use in Leadership Training to record speeches, programs, etc. Provision should be made for the recorder to be used in the library; Record Player

Instructional Equipment

2 microscopes for use in plant, animal and soil sciences
1 bioscope

Furniture

Classroom - tables and chairs for a seating capacity of 20. Tables to be arranged in U-shape. The classroom should be equipped with a science-type demonstration table.

Shop - The shop should be equipped with the following equipment:

1 Air compressor
1 10" table saw, 220 volts
1 12" radial arm saw, 220 volts
2 180 amp arc welders, 220 volts
1 Industrial vacuum cleaner
1 Paint sprayer
1 14" drill press (floor model), 120 volts
1 6" jointer, 220 volts
1 14" band saw, 120 volts
1 pipe vise 1/8" to 3½" capacity
1 portable chalk board
1 reamer ¼" to 2"
1 electric hack saw, 120 volts
1 oxy-acet outfit
1 2-ton chain hoist on "A" frame
3 6" electric grinders
1 100 lb. anvil
3 5' machinists vises, swivel base
6 woodworking vises
1 4" electric table model electric belt sander
1 12" electric portable belt sander
1 6" industrial type skill saw
1 ½" chuck electric portable drill - industrial
1 24" jigsaw
10 Arc welding helmets

Land Laboratory

Junior High Schools - 3 acres fenced with 6' chain link fence, irrigation and a greenhouse equipped with heaters and exhaust fans and automatic mist system. One small 1-row tractor and equipment similar to Farm-All Cub. 1 gasoline driven power sprayer with 200 pounds nozzle pressure - 15 gal. capacity

Senior High Schools - 20 acres with 3 acres fenced with 6' chain link fence with irrigation, greenhouse, 15 gal. gasoline power sprayer with 200 pounds nozzle pressure. One

2-row tractor and equipment. The 20 acres should be fenced with 4' American Field Fence. Both facilities should have storage space* for equipment.

*Such storage space described in last pages of this section.

Shop Equipment

Item	Size or Description	Number
	Tools and Equipment for Carpentry	
Bars	Crow and tamping combination, 6 ft., Homemade	2
Bars	Pinch, 3 ft. and 4 ft. long	2 each
Bevels	Sliding T, 8", and 10"	1 each
Bits	Auger, $\frac{1}{4}$" to 1" by 16th., set	2
Bits	Countersink	3
Bits	Expansive 7/8" to 3"	1
Bits	Screw driver, assorted sizes	2
Bits	Wood boring, $\frac{1}{4}$" to 3/4" by 16ths., set	1
Bob	Plumb	1
Brace	Ratchet bit, 10" sweep	4
Brush	Bench	3
Chisels	Wood $\frac{1}{4}$" to $1\frac{1}{2}$" by 4ths., set	1
Clamps	Bar, 4 ft., and 5 ft.	1 each
Clamps	C, 4", 6", 8"	1 each
Clamps	Saw	2
Dresser	Emery wheel	1
Draw knife	10"	4
Drill	Hand $\frac{1}{4}$"	2

Drivers	Screw, 4", 6", 8", 10"	2 each
Gauges	Marking	3
Grinder	Bench, Hand; wheel 4" or 6"	1
Hammers	Curved, 16 oz.	8
Hammers	Straight, 16 oz.	4
Hatchet	Broad 4½"	1
Hatchet	Shingling	4
Level	Builders	1
Level	Carpenters	2
Mallets	Wood	2
Nippers	End cutting	1
Plane	Block, 6"	4
Plane	Jack, 14"	2
Plane	Jointer, 22"	1
Rule	Brass bound, nonfolding 2'	4
Rule	Folding, 6 ft.	6
Rule	Steel Trap, 6 ft. and 100'	2
Rasp	Wood or combination woodhoof horseshoer rasp	2
Saw	Compass, 12"	2
Saw	Crosscut, 8 and 10 point, 26"	4
Saw	Keyhole, 10"; 6" Coping	2 each
Saw	Rip, 5½ and 6 point, 24"	1 each
Set	Nail, assorted set	1
Set	Saw, pistol grip	2
Square	Combination, 12"	2
Square	Carpenters steel, 16" x 24"	3
Square	Try. 8", all metal	4

Tape	Steel, 69 ft. to 100 ft.	1
Vice	Woodworking, 7" jaw	10

For Concrete Work

Box	Measuring, 1 cu. ft.	1
Edger	Square corners and round corner	1 each
Float	Metal, and Wood	1 each
Groover	Concrete workers	1
Jointer	Cement	1
Pail	14 quart	2
Pail	10 quart	2
Platform	Mixing, homemade	1
Tamper	Homemade	1
Shovels	Square point	2
Trowel	Brick, 9" and 11", pointed	2 each
Trowel	Plastering, 11"	2
Trowel	Pointing, 6"	1

For Glazing Work

Cutter	Glass	1
Knives	Putty, 1¼", and 2½ blade	2 each
Sash Tool	Size No. 4	1

For Metal Work

Anvil	Chilled face, 150-200 lbs.	1
Anvil	Guard and sickle	1
Bits	Twist, ¼" to 1" by 8ths., set	1
Brush	Wire, wheel	1
Brush	Wire, hand brush	4

Callipers	Inside and out - 6"	1 each
Can	Squint, oiler, assorted sizes	4
Chisel	Cold 3/8", ¼", 3/4", 1"	2 each
Chisel	Cold-eye, 1¼" blacksmiths, handled	2
Chisel	Hot-eye, 1½" blacksmiths, handled	2
Clippers	Bolt, 30" long or longer	1
Divider	Wing, 8"	1
Drivers	Screw, 4", 6", 8", 10", shockproof handles	2
Extractor	Screw, "Ezyout" set	1
Forge	30" x 36" x 6"	1
Goggles	Grinding	12 pair
Goggles	Welding, Oxyacetylene	12 pair
Gun	Oil and grease	1
Gun	Zerk-lever-type	1
Hammer	Ball peen, 2 lb.	2
Hammer	Ball peen, 1 lb.	3
Hammer	Cross peen, 2½ lb.	2
Hammer	Sledge, 6 to 8 lb.	2
Hardies	Shank to fit anvil	1
Helmet	Arc Welders	4
Pliers	Combination side cutting	10
Pliers	Long nose, 6"	6
Puller	Cotter pin	1
Punches	Aligning	2
Punches	Center machinists', assorted	2
Punches	Pin, machinists', assorted	2

Punches	Blacksmiths, assorted	2
Reamer	Burring ¼" to 2"	1 each
Reamer	Expansion, blade	1
Saw	Hack, adjustable frame	4
Set	Rivet, 4", or 5"	1
Shield	Welders Arc	10
Squares	Carpenters Steel, 8" x 12"	2
Tongs	Bolt, 3/8", ½", 3/4"; 20" to 24"	2 each
Tongs	Plowshare, 24"	4
Tongs	Straight lip, 20" to 24"	4
Vise	Drill press, 6" opening	1
Vise	Machinists, 4½" jaw swivel base	2
Vise	Blacksmiths, solid box, 50 - 100 pounds	1
Welder	Electric - 180 AMP	2
Welder	Oxyacetylene	2
Wrenches	Adjustable, open end 8"	4
Wrenches	Adjustable, open end, 10", 12" 18", (alloy)	2 each
Wrenches	Box end, 5/16" to 1", set	1
Wrenches	Combination, box and open end, 5/16" to 3/4", set	1
Wrenches	Socket	1 set
Wrenches	Monkey, 12", and 18"	2 each
	Plumbing	
Cutter	Pipe, capacity ¼" to 2"	1
Die	Stock and dies ratchet, 1/8" to 3/4"	1
Die	Stock and dies ratchet, receding, dies, 1" to 2"	1

Reamer	Papered, ¼" to 2"	1
Vise	Pipe, 1/8" to 3½"	1
Wrenches	Pipe, 10", 14", 18", 24"	1 each
	Soldering	
Pliers	Diagonal cutting, 8", and linemans 8"	2 each
Snips	Pin, 12" duck bill, and straight lip	1 each
Soldering	Electric tip, diameter 9/16" to 1/8"	1 each
Torch	Quart size, gasoline	1
Torch	Prest-o-lite linemans outfit	1
	Miscellaneous	
Booth	Arc-welding (10' x 10')	2
Extinguisher	Fire	2
Kit	First Aid	1
Rack	Lumber, vertical storage	1
Rack	Metal	1
Rack	Wash	1
Saw horses	Homemade	6
Stretcher	Wire	1
Tool Cabinet 2½' x 4'		10
Tool Cabinet	4' x 10' x 6' high	1
Workbench	2' x 6' x 30" high (movable)	5
Workbench	2' x 8' x 30" high (movable)	1
Workbench	2' x 12' x 30" high (movable)	1
Workbench	4' x 10' x 30" high (movable)	1
	Mechanics Tools	
Jack	Auto, heavy duty hydraulic	1

Wrenches	Distributor set	1
Wrenches	Spark plug socket set	1
Wrenches	Special mechanics set, 7/16" to 1", 12 point set	1

Out Door Tools

Hoe	Garden	6
Rake	Garden	6
Rake	Yard	6
Shovel	Round point	4
Spade	Medium sized	4
Wheelbarrow	Metal box	1
Axe	3½"	4

Note: A portable blackboard, 4' x 6', will be provided for use in the shop, or elsewhere as needed.

Power Tools

Drill	Electric, with one set of bits; high speed	1
Drill	Drill Press, 15" floor model, electric	1
Grinder	Bench electric, wheel size 6"	3 each
Jointer	6", electric	1
Sander	electric; 4" belt	1
Saw	Band saw, heavy duty 12"	1
Saw	Radial Arm 12"	1
Saw	Power hack saw, heavy duty	1
Saw	Tilting arbor, 10", or 12" floor model	1

Shop Supplies

A good supply of the following items should be kept on hand at all times:

1. Bolts, carriage, and machine
2. Braces, iron
3. Brads, corrugated
4. Coal, for the forge
5. Glue, wood
6. Hardware cloth, and chicken wire
7. Iron, and steel; both rods, and sheets
8. Lumber
9. Nails, assorted sizes and types
10. Oil, cylinder
11. Oxygen gas, and acetylene gas; in cylinders
12. Paints, and varnishes
13. Paints, metal
14. Sand paper
15. Screws, all sizes and types
16. Sheet metal
17. Solder, flux
18. Tin
19. Wood filler, or putty
20. Welding rods, for electric, and oxyacetylene welders

Note: Many other supplies will be needed from time to time, but they can be acquired periodically as needed.

V. Planned and anticipated changes in program include greater emphasis upon ornamental horticulture and training in agri-related occupations.

VI. Facts to consider in constructing facilities for a vocational agriculture complex:

A. Classroom - Floor space 35 to 45 square feet per student. Maximum class size 20 students. Dark tile floor, notebook storage space for 75 notebooks per teacher, 10" x 12" science-type demonstration table with water and gas. Magazine rack for 25 magazines, classroom ceiling, side walls and rear walls should be acoustically treated. Front wall should remain reflective. In multiple teacher departments, classrooms should be designed so both rooms can be made into one unit with accordion type partitions. Partitions should be as sound proof as possible. Air conditioned provisions for showing visual aids - no sky lights.

B. Storage rooms - A storeroom should be readily accessible to the classroom to facilitate transfer of teaching materials to classroom or demonstration desk. Storeroom should be well lighted, have well placed convenient outlets and should be constructed to prevent damage by rodents, insects and moisture. Should have a tile floor.

C. Library - Although there is a central library in the school, each agricultural department should have a library as part of the agricultural complex. Should have shelves for 500 books and 2 4-drawer metal letter size file cabinets for bulletins. Should have well placed convenient outlets for use of tape recorder, etc. Tile floor and air conditioning.

D. Office - The office should be located in such a way as to make it possible to view both the shop and classroom. Ample space should be provided for 2 4-drawer locking metal file cabinets, a secretary and small conferences. If a multiple teacher department it should be large enough for all teachers. Should have tile floor, air conditioning, telephone, clock and central communication system, typewriter and adding machine.

E. Rest Rooms - Rest rooms should be located convenient to classroom and shop. Should have shower facilities sufficient for a class of 20, toilets and urinals and forced air dryers. Full length lockers for 50 students per teacher.

F. Shop - A shop with inside space of 40' x 60', two overhead garage type doors with a walk through door, two welding booths with doors on overhead tracks. The shop should be furnished with vertical storage racks for lumber and metal (see OE-81003 bulletin). Ceilings should be a minimum of 14'. An outside work area of 20' x 40' concrete floor with a roof and enclosed with chain link fence with at least a 12' gate should be included in shop. The outside area should have convenient outlets, lights and an outlet for arc welder. Exhaust fans in welding area, small gasoline motors area and paint area should be included. Overhead drop cords for shop equipment and at least 6 flush-type floor receptacles (220 volts).

G. Tool Room - The tool room should be a minimum of 10' x 10'. The door should be divided to facilitate tool check out and a metal storage cabinet with 60 drawers 3" x 5" x 12" for storage of bolts, nuts, etc. See OE-81003, Buildings, Equipment and Facilities for Vocational Agriculture Education, pp. 46, 47, 48 and 49 for details of metal and lumber storage racks.

H. Storage Shed - A shed should be included in the land laboratory for storage of equipment and tools. The shed should have a concrete floor, be equipped with lights, convenient outlets, outlet for A.C. arc welder with an enclosed tool room.

Recommended for Consideration

Paxton High School - Jacksonville, Florida
Winter Haven High School - Winter Haven, Florida

References

Buildings, Equipment and Facilities for Vocational Education, OE-81003

U.S. Department of Health, Education and Welfare Office of Education

Term paper by Joseph G. Wood - EN568

Second priority items which may have to be sacrificed in the light of space allotments by the Board of Education would include the restrooms and storage sheds.

Committee:

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EDUCATIONAL SPECIFICATIONS FOR VOCATIONAL SHOPS

These educational specifications are based on the concept of comprehensive high schools, and include Vocational-Technical shops. Should the decision be made to centralize Vocational-Technical instruction in one area Vocational-Technical School, it would not be necessary to include these facilities in all senior high schools.

The minimum space requirements adopted by the School Board did not make provision for an Auto Mechanics Shop. For this reason the total square footage (12700 sq. ft.) shown in these specifications exceeds the total listed in the adopted minimum space requirements by 3100 sq. ft.

Format for Junior High School Industrial Arts Shop
(1200 pupils)

I. Course Content and Activities

A. Purpose

The primary purpose of industrial arts in the junior high school curriculum is to provide the student with an opportunity to explore the many aspects of the industrial-technological world of which he is a part.

This exploration is best provided for on a unit by unit basis where the study content is also keyed to individual activities in various craft media.

Before a student can make even the most simple project, he must make at least three basic decisions: (1) What do I want to make? (2) What do I want to make it out of? and (3) How shall I proceed?

This individual involvement, coupled with group study of a specific unit where the source of materials and their production and final applications in our lives is brought out, makes for a shared learning experience that reaches the student who absorbs only portions of what actively engages the rest of the class.

Therefore, to awaken a knowledge and awareness of the world of industry around them, and to place a variety of craft experiences before them, from which they may possibly choose a future vocation or rewarding hobby, is the key to a successful program of industrial arts at the junior high school level.

II. Building - 3200 sq. ft.

Physical facilities in general - class limit, 24 students

1. Air conditioned classroom and shop
2. Natural light to be effectively controlled to eliminate glare. Sufficient supplemental artificial light, properly diffused and distributed, is to be provided for a minimum of 30 foot - candles at bench height throughout the shop.
3. Exhaust ventilation equipment available in areas producing excessive fumes, gases, heat and dust.
4. Adequately and properly located gas, water, electrical and compressed air facilities to be provided.
5. Shop facility to have a minimum of two entrance-exit doors, one at least 36" or more and one a double door for unloading lumber, equipment, etc.
6. Ceiling height is appropriate, i.e., preferably 14' - 16' for balcony storage area, between 12' and 24' in the shop and drawing room and ceilings are constructed of a material having a high coefficient of sound absorption.
7. Provide a ventilated, fire-resistant cabinet for the storage of combustible materials. A metal, self-closing container to be provided for soiled rags. Shop to be equipped with fire extinguishers of correct type and size.
8. Shop to contain a convenient and centrally located tool and supply center and an adequate number of well laid out tool panel areas of special tools.
9. Appropriate and convenient film-showing facilities to be provided both in shop and classroom.
10. Power machinery conveniently located and having switches or control boxes (painted a conspicuous color). Switches easily accessible from the position of the operator and all machines should be grounded. Power equipment definitely limited in junior high.
11. A master electrical panel should be conveniently and centrally located in the shop. It is also desirable to have the second panel so each machine may be cut off individually.
12. One chalkboard and two tackboards ample in size (4' x 8' or 12') placed in the classroom and in each shop area.

13. Building complex should have a boys' and girls' toilet conveniently located.

14. Industrial arts, agriculture and general shop should be located in a complex with covered walkways to buildings and to the main school building.

15. Water coolers available in complex or in individual buildings.

16. Display case for projects to be located near lunchroom or a centrally located area where students can observe students' projects.

III. Equipment

A. Classroom

1. Blueprint machine
2. 20 drawing tables with cabinet and 20 stools
3. Magazine racks along a wall approximately 24" x 10' long, angled
4. One book cabinet conveniently located for students
5. Floor covering - cork, carpet or wood
6. Print and storage room with door opening into classroom
7. Windows in office so instructor can observe shop and classroom
8. Prefer office located between classroom and shop

B. Shop - Shop to be appropriately wired and laid out for the following at 10' intervals:

1. Wood lathes - 4
2. Jointer - 6" - 1
3. Planer - 12" - 1
4. Saw - band - 1
5. Jig saw - 2
6. Grinder - 1
7. Buffer - 1

8. Drill - 1

9. Bunsen burners - 3

10. Ceramic kiln - 1

11. Potter's wheel - 1

12. Glue bench and an art metal bench - 1

13. Work benches with 4 vises for 4 work stations each 56" x 73"

14. Sink 20" x 36" x 18" deep (1 inside and 1 outside)

15. Leather craft bench - 1

16. Dust control unit - 1

17. Exhaust fan in finishing room

18. Sealer on shop floor to prevent cement from powdering up

19. Gas in shop for heating metals and other materials

20. Shop to have finishing room, tool room, project storage room and place for a lumber storage area

Additional desirable items in the shop:

1. Change 1 wood lathe to a metal turning lathe

2. 6" table saw - 1

3. Spindle shaper - 1

4. An outside covered area with cement floor with electrical outlets - 2, 110 volt. Size 15' x 20' conveniently to the double door in the shop

Format for a Senior High School Industrial Arts Shop
(1600 pupils)

I. Course Content and Activities - A laboratory of learning

A. Purpose:

Emphasis on the senior high level should be directed to the orientation and general educational aspects of industrial arts. This will include the development of creativeness in planning, designing, and constructing projects. Refinements in skills and understandings is paramount in the high school industrial arts program.

II. Building - 3200 sq. ft. - air conditioned

A. Physical facilities in general - class limit, 20 students

1. Air conditioned classroom and shop
2. Natural light to be effectively controlled to eliminate glare. Sufficient supplemental artificial light, properly diffused and distributed, is to be provided for a minimum of 30 foot - candles at bench height throughout the shop.
3. Exhaust ventilation equipment available in areas producing excessive fumes, gases, heat and dust.
4. Adequately and properly located gas, water, electrical and compressed air facilities to be provided.
5. Shop facility to have a minimum of two entrance-exit doors, one at least 36" or more and one a double door for unloading lumber, equipment, etc.
6. Ceiling height is appropriate, i.e., between 12' minimum and 14' (will permit balcony storage) in the shop and drawing room and ceilings are constructed of a material having a high coefficient of sound absorption.
7. Provide a ventilated, fire-resistant cabinet for the storage of combustible materials. A metal, self-closing container to be provided for soiled rags. Shop is to be equipped with fire extinguishers of correct type and size.
8. Shop to contain a convenient and centrally located tool and supply center and an adequate number of well laid out tool panel areas for special tools.
9. Appropriate and convenient film-showing facilities to be provided both in shop and classroom.
10. Power machinery conveniently located and having switches or control boxes (painted a conspicuous color). Switches easily accessible from the position of the operator and all machines should be grounded.
11. A master electrical panel should be conveniently and centrally located in the shop. It is also desirable to have the second panel so each machine may be cut off individually.
12. One chalkboard and two tackboards ample in size (4' x 8' x 12') placed in the classroom and in the shop area.
13. Building complex should have a boys' and girl's toilet conveniently located.

14. Industrial arts, agriculture and general shop should be located in a complex with covered walkways to buildings and to the main school building.

15. Water coolers available in complex or in individual buildings.

16. Display case for projects to be located near lunchroom or a centrally located area where students can observe students' projects.

III. Equipment

A. Classroom - 768 sq. ft. - planning, drafting and library

1. 20 drawing tables w/cabinet

2. 20 stools

3. Book shelves for reference books conveniently located for all students

4. Office located so instructor can observe classroom ahd shop

5. 1 chalkboard 4' x 12' and 2 tackboards, 4' x 8' with adequate wall space provided.

B. Shop - 2432 sq. ft. - shop should be appropriately wired and laid out for the following equipment:

1. 6" table saw (circular)

2. Wood drill

3. Metal drill

4. Grinder

5. Jointer

6. Planer

7. Sander

8. Hack saw

9. Band saw

10. Jig saw

11. Metal lathe

12. Wood lathe

13. Shaper

14. Kiln

15. Potters wheel

16. 4 work benches with vises and cabinets beneath tables

17. Sink - 20' x 36" x 18" deep

18. Leather craft bench

19. Art metal bench

20. Glue bench

21. Gas in shop for heating metals

22. 4 bunsen burners

23. Finishing room with tables

24. Exhaust fan

25. Tool room

26. Project storage room

27. Lumber storage space

28. Outside covered area with cement floor, with 2 electrical outlets

29. Dust unit

C. Industrial Arts

Classroom may be equipped with work benches as those are in the shop in order to connect to a two-teacher department. Drawing could be done on these work tables in lieu of drawing tables. A junior high school or senior high school of 700-plus enrollment should have a two-teacher department.

Electronics

Goal

To prepare students for entry jobs in electronics and electrical technologies. Therefore, the emphasis is on broad technical competence, rather than specific skills and techniques. It is centered on the occupational elements that normally cannot be obtained from experience alone.

Physical Facilities

An air conditioned, diffused ceiling lighted, electronics laboratory of at least 1500 square feet, with an adjoining storage area and tool room of at least 400 square feet and an office, conference room and reference library of about 100 square feet.

Equipment

The laboratory should be equipped with 12 student stations (24 students), each with a bench area of about 3 by 6 ft. isolation transformers and multiple 120 volt 60 cycle electrical outlets, suitably grounded.

Three work shop stations with small machines and hand tools equipped for locking when not in use.

One instruction station, equipped as a lecture and demonstration area with blackboard, tackboard, and visual aid positions, control stations, screen and black out curtains. Safety features including circuit breakers, emergency cut off switches, insulated floor covering, fire equipment and first aid supplies. Supplementary electrical outlets

Water cooler and toilet facilities in immediate area.

The storage area should be designed with storage positions for roll-out carts for meters and equipment, arranged for ready inventory by check of unfilled spaces; with supply bins arranged for ready accessibility and quick identification of components and supplies.

The office should be arranged so that it can be used as a small conference room.

That files are readily available yet not in the way, when the office is used for other purposes.

The reference library should be readily accessible to the laboratory unless the references are placed on lockable shelves in the laboratory.

Format for an Auto Mechanics Shop (Maximum 20 per class)

I. Course - Auto Mechanics

A. General

Identical learning experiences cannot be provided each member of the Automotive Class by the use of live automobiles because it is impractical to furnish enough vehicles with the same needs to afford equal work experience for each student.

Therefore, a course is designed to control learning through the use of school controlled live engine units and other types of training units within the automotive training shop. This makes it much easier to schedule shop training and follow the course outline. The equipment is always available so that the instructor can correlate classroom work with shop activities.

Jobs on live units stimulate student interest, and laboratory type projects are elevated in importance in the eyes of the student by his being able to start the engine and test the job upon completion.

Training on school controlled units affords the advantages of laboratory instruction without the use of the entire automobile.

B. Objectives

1. To develop and direct learners shop activities along lines parallel to present day repair shops.
2. To teach correct work habits and safety practices.
3. To develop the learner's job judgment and initiative and direct them along lines best suited to him.
4. To develop individual responsibility for the work done in the shop.
5. To instill in the learner's mind the need for accuracy and precision in repair work, and the methods to obtain them.
6. To teach the operations possible and most practicable on any of the various machines, tools, and methods in a repair shop.
7. To teach the necessity for cleanliness and orderliness in the shop and in all machine work.
8. To teach the care and use of machine tools and the reasons for each.

9. To teach a variety of jobs, so selected that the learners may see in operation as many phases of the repair trade as possible, thereby gaining a broader knowledge of the possibilities of the trade.

10. To use our own stationary units, and training units to better schedule our shop training without having to obtain automobiles from outside the shop.

II. Building - 4500 sq. ft. - Maximum of 20 students per class

  A. Classroom - 480 sq. ft.

  B. Shower and locker room - 250 sq. ft.

  C. Storage and tool room - 250 sq. ft.

III. Equipment and Furniture - Air conditioning

  A. Classroom - 20' x 24' area

    1. Teacher's desk with overhead projector (accessory)

    2. Projection screen - portable, daylight

    3. Blackboard - min. 4' x 16'

    4. Tackboard - min. 4' x 8'

    5. Book shelves for magazines 12" x 18" x 16"

    6. Book shelves for reference books along wall

    7. Black out equipment for visual aids

    8. Adequate lighting

  B. Shop - adequate space, electrical outlets and lighting provided for the following:

    1. Tool room and storage room

    2. Washroom and showers

    3. Fire resistant cabinet for storage of combustible material

    4. Sound proof walls and ceiling

    5. 10 metal work benches with vises

    6. 10 lights over benches

7. 12 engines with exhaust pipe outlets in wall

8. 12 racks for engines

9. Water tank and pump, to pump water through motors for cooling purposes

10. Cement floor

11. Glide in overhead doors should be on one side of shop

12. Crane way installed for hoists

13. Arc welder - 220 volts

14. Air compressor

15. 2 dry powder fire extinguishers

16. *Air condition building, other use exhaust fans*

17. 1 Scope motor tester

18. 1 Tune-up tester composed of the following parts:

    a. Volts ignition tester
    b. Tack dwell tester
    c. Vacuum tester
    d. Electronic distributor tester

19. 1 Universal compression tester

20. 1 Cabinet containing the following:

    a. Distributor tester
    b. Volt-Amp tester
    c. Battery starter tester
    d. Wheel balancer

21. 1 Generator regulator tester

22. 1 Bench grinder

23. 1 Rivet and muffler cutter

24. 1 Valve refacing machine

25. 1 Armature lathe

26. 1 Drill presser ½"

27. 1 Hard seat grinder (for refacing heads and blocks)

28. 1 Drill motor, ½"

29. 1 Drill motor, ¼"

30. 1 Armature tester (Growler)

31. 1 Battery charger (fast)

32. 1 Timing light

33. 5 Creepers (one for every 2 students)

34. 1 Spark plug cleaner

35. 1 Parts cleaning tank

36. 10 Differentials, complete (these should all be the same type or model)

37. 10 Transmission, standard (all same type or model)

38. 10 Drop lights, 25 feet

39. 50' sections air hose

40. 2 No. 10 dry powder fire extinguishers

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APPENDIX

The following data are based on the course or subject enrollment of the eight secondary schools in Alachua County. Total enrollment of students in grades 7 - 12 is 9547, October, 1966.

These schools are:

a. Howard Bishop Junior High School
b. Gainesville High School
c. Hawthorne High School
d. Lincoln High School
e. A.L. Mebane School
f. Newberry High School
g. Santa Fe High School
h. Westwood Junior High School

Chart I shows the enrollment in each subject offered in the curriculum at each school and the total number of students taking that subject in the eight schools. The last figure is the percentage of the total enrollment of 9547 that were taking that particular subject in October, 1966.

When a new secondary school is to be constructed Charts II and III will be developed, based on projected enrollment:

Chart II would be the result of taking the percentage of the total number of secondary school students in Alachua County enrolled in each subject and applying that percentage to a school with a given projected enrollment.

Chart III would be the actual enrollment projected in subject related areas.

These two charts will be added to this report at a later date.

COURSE OF STUDY AND ENROLLMENTS - ALACHUA COUNTY SECONDARY SCHOOLS - OCTOBER 1966
(Total Number Students in Eight Secondary Schools = 9547)

Grades	7-9	7-9	10-12	7-12	7-12	7-12	7-12	7-12		
Schools	Bishop	Westwood	G.H.S.	Lincoln	Mebane	Santa Fe	Hawthorne	Newberry	Total	%
Course Offerings										
Typing I	204	168	270	137	45	83	34	48	989	10.36
Typing II	—	—	62	—	16	—	—	—	78	.82
Intermediate Typing	—	—	40	—	—	—	—	—	40	.42
Management	—	—	VOE 14	VOE 21	—	—	—	—	35	.38
Bookkeeping I	—	—	107	—	26	33	12	13	191	2.00
Bookkeeping II	—	—	15	—	—	13	—	—	28	.29
Shorthand I	—	—	103	14	12	33	—	25	187	1.96
Shorthand II	—	—	20	—	—	13	—	—	33	.35
Office Practice	—	—	—	—	—	29	—	12 & Typ.2	41	.43
General Business	gr. 9 120	gr. 9 64	—	—	gr. 7 107	gr. 9 32	—	—	323	3.38
C. B. E.	—	—	40	—	—	—	—	—	40	.42
D. E.	—	—	46	—	—	—	—	—	46	.48

	7-9	7-9	10-12	7-12	7-12	7-12	7-12	7-12		
	Bishop	Westwood	G.H.S.	Lincoln	Mebane	Santa Fe	Hawthorne	Newberry	Total	%
Business English	—	—	32	—	—	29	—	—	61	.64
Business Math	—	—	90	25	—	69	24	—	208	2.18
Consumer Economics	—	—	—	—	—	15	—	—	15	.16
Office Machines	—	—	37	—	—	29	—	—	66	.69
Business Law	—	—	38	—	—	—	—	—	38	.40
Art I	59	27	75	1 sem. gr.7&8 girls 240	56	—	—	—	457	4.79
Art II	29	—	65	—	—	—	—	—	94	.98
Art III	45	—	—	—	—	—	—	—	45	.47
Enrichment Art	—	70	—	—	124	—	—	—	194	2.03
Crafts	—	—	60	—	—	—	—	—	60	.63
Driver Education	333	373	92	72	100	73	for 1967 60	55	1158	12.13
Safety	—	—	—	—	—	—	—	66	66	.69
Driver Education (Lecture only, enrichment, gr.8)	—	—	—	—	107	—	—	—	107	1.12
D. C. T.	—	—	24	25	—	—	—	—	49	.51

	7-9	7-9	10-12	7-12	7-12	7-12	7-12	7-12		
	Bishop	Westwood	G.H.S.	Lincoln	Mebane	Santa Fe	Hawthorne	Newberry	Total	%
Home Economics	193	126	—	222	gr.8 57	gr.8 50	75	30 gr.8 28 gr.9	781	8.18
Home Ec. Sp. Ed.	—	—	30	—	—	—	—	—	30	.31
Home Ec. Basic Comp.	—	—	106	—	gr.9 75	—	—	—	181	1.91
Foods	—	—	37	15	H.Ec.III 10	—	—	H.Ec.II,III,IV 30	92	.96
Mod. Family Liv.	—	—	13	74	42	25	40	—	194	2.03
Clothing	—	—	—	—	11	—	—	—	11	.12
General Math I	—	gr.9 98	121	gr.7 359	130	41	119	31	899	9.42
General Math II	—	—	52	gr.8 328	86	30	—	—	496	5.20
Modern Math I	—	95	—	—	—	132	—	65	292	3.06
Mod Math I Accel	—	252	77	—	—	12	—	—	341	3.57
7th Mod Math Basic	190	70	—	—	82	61	61	32	496	5.20
7th Mod Math Acc.	125	62	—	—	25	35	—	—	247	2.59
7th Mod Math Reg.	158	282	—	—	—	34	34	33	541	5.67
8th Mod Math Basic	200	94	—	—	93	27	54	32	500	5.24
8th Mod Math Acc Alg.	81	53	—	—	31	35	30	10	240	2.51
8th Mod Math Reg	187	217	—	—	—	62	—	24	490	5.13

	7-9 Bishop	7-9 Westwood	10-12 G.H.S.	7-12 Lincoln	7-12 Mebane	7-12 Santa Fe	7-12 Hawthorne	7-12 Newberry	Total	%
Modern Math II	—	—	—	—	—	—	—	66	66	.69
General Math	gr.9 229	—	—	68	—	gr.9 78	—	—	375	3.93
General Math	—	—	—	—	—	gr.10 86	—	—	86	.90
Algebra I	144	gr.9 226	191	71	47	93	34	gr.9-12 64 30 for 1967	870	9.11
Algebra II	—	—	298	1967 30	10	29	22	13	402	4.21
Plane Geometry	40	52	—	58	5	48	11	32	246	2.58
Simple Geometry	—	—	401	—	—	—	—	—	401	4.20
Fund. Geometry	—	—	118	—	—	—	—	—	118	1.24
SMSG Geometry	—	—	9	—	—	—	—	—	9	.09
Trigonometry	—	—	206 + Alg 3	1967 30	—	—	11	8	255	2.67
Advanced Math	—	—	—	—	—	15	—	—	15	.16
Music Appreciation	—	—	—	30	41	—	—	—	71	.74
Music & Theory	—	—	—	—	—	—	44	—	44	.46
Enrichment Music	226	66	—	gr.7&8 689	gr.7&8 231	—	60	gr.7 69	1341	14.05

	7-9 Bishop	7-9 Westwood	10-12 G.H.S.	7-12 Lincoln	7-12 Mebane	7-12 Santa Fe	7-12 Hawthorne	7-12 Newberry	Total	%
Band	149	185	87	102	25	109	63	38	758	7.94
Beginners'	42	31	—	—	—	20	—	—	—	—
Intermediate	38	28	—	—	—	19	—	—	—	—
Concert	69	73	—	—	—	69	—	—	—	—
Band II	—	53	45	—	—	—	38	—	136	1.42
Band Ens.	—	—	14	—	—	—	—	—	14	.15
Instrumental Music I	—	—	—	—	48	—	—	—	48	.50
Instrumental Music II	—	—	—	—	14	—	—	—	14	.15
Orchestra	15	23	—	—	—	—	—	—	38	.40
Chorus - Mixed	97	235	67	60	64	55	60	52	690	7.22
Boys' Chorus	—	—	23	—	—	—	—	—	23	.24
Girls' Chorus	—	—	55	—	—	—	—	—	55	.58
Physical Education	1369	1172	749	1259	518	483	350	197	6097	63.84
Varsity Sports	—	—	160	—	—	—	—	42	202	2.11
Health Education	—	—	—	—	21	—	—	gr.8 enrich. 66	87	.91

	7-9	7-9	10-12	7-12	7-12	7-12	7-12	7-12		
	Bishop	Westwood	G.H.S.	Lincoln	Mebane	Santa Fe	Hawthorne	Newberry	Total	%
Biology I	127	132	310	213	92	60	57	27	1018	10.66
Biology II	—	—	27	—	—	53	—	—	80	.84
BSCS Biology	33	128	—	—	—	50	—	30	241	2.52
S. M. Biology	—	27	—	—	—	—	—	—	27	.28
General Science (Phys. Science)	103	27	299	gr.11&12 61	26	77	gr.9 65	gr.10,11,12 26	684	7.16
Adv. Gen. Science	—	—	—	gr.9 135	—	—	—	—	135	1.41
Earth Science	—	—	—	—	78	—	—	—	78	.82
Physics	—	—	187	—	—	13	—	—	200	2.09
Physics II	—	—	26	—	—	—	—	—	26	.27
Astronomy	—	—	35	—	—	—	—	—	35	.37
Chemistry	—	—	265	29	23	38	17	41	413	4.33
Chem. Study	—	—	115	—	—	—	—	—	115	1.20

	7-9 Bishop	7-9 Westwood	10-12 G.H.S.	7-12 Lincoln	7-12 Mebane	7-12 Santa Fe	7-12 Hawthorne	7-12 Newberry	Total	%
Living Science Gr.7	474	414	—	347	107	130	95	65	1632	17.09
Science Gr. 8	470	334	—	342	124	134	84	65	1553	16.27
Introd. Spanish	18	24	—	27	10	—	—	—	79	.83
Spanish I	17	29	138	—	—	47	—	—	231	2.42
Conv. Spanish	48	—	—	—	—	—	—	—	48	.50
Enrich Lang.	—	72	—	—	107	gr.7 28	—	—	207	2.17
Accel. Spanish I	—	16	—	—	—	—	—	—	16	.17
Spanish II	—	—	123	—	—	25	—	—	148	1.56
Spanish III & IV	—	—	26	—	—	12	—	—	38	.40
Introd. Latin	—	24	—	—	—	—	—	—	24	.25
Latin I	28	63	59	—	—	—	—	—	150	1.57
Latin II	—	—	88	—	—	—	—	—	88	.92
Latin III & IV	—	—	10	—	—	—	—	—	10	.10

	7-9	7-9	10-12	7-12	7-12	7-12	7-12	7-12		
	Bishop	Westwood	G.H.S.	Lincoln	Mebane	Santa Fe	Hawthorne	Newberry	Total	%
French I	—	—	139	—	—	—	—	24	163	1.71
French II	—	—	66	—	—	—	—	—	66	.69
French III & IV	—	—	30	—	—	—	—	—	30	.31
English Gr. 7	474	—	—	347	107	130	94	66	1218	12.76
English I Gr. 7	—	94	—	—	—	—	—	—	94	.98
English II Gr. 7	—	290	—	—	—	—	—	—	290	3.04
English III Gr. 7	—	27	—	—	—	—	—	—	27	.28
English Gr. 8	475	364	—	342	124	134	82	34	1555	16.29
English I gr. 9	404	353	—	253	153	100	68	26	1357	14.21
English II Gr. 10	—	—	799	241	97	113	66	27	1343	14.07
English III Gr. 11	—	—	643	195	104	102	48	30	1122	11.75
English IV Gr. 12	—	—	511	172	87	56	23	22	871	9.12
Reading	65	72	—	50	gr.7,8,9 384	112	33	gr.7 enrich.=35 70	786	8.23
Writing	—	—	—	—	—	31	—	—	31	.32

	7-9	7-9	10-12	7-12	7-12	7-12	7-12	7-12		
	Bishop	Westwood	G.H.S.	Lincoln	Mebane	Santa Fe	Hawthorne Applied	Newberry gr.8-12,Skills	Total	%
Voc. English	—	—	—	—	—	—	14	147	161	1.69
Speech	Comb./drama 182	—	190	39	—	50	—	—	461	4.83
Drama	—	—	43	—	—	—	—	—	43	.45
Journalism	—	—	19	—	—	—	—	13	32	.34
Year Book	—	30	27	—	—	12	—	—	69	.72
Adv. Grammar	—	—	30	—	—	—	—	—	30	.31
Contemporary Issues	—	—	78	—	—	—	—	—	78	.82
Humanities	—	—	40	—	—	—	—	—	40	.42
Prob. of Dem.	—	—	29	60	—	82	—	—	171	1.79
Sociology 1 sem.	—	—	180	—	—	—	—	—	180	1.89
Psychology	—	—	1 sem. 180	1 sem. 35	1 yr. 23	—	—	—	238	2.49
Economics 1 sem.	—	—	—	35	—	—	—	—	35	.37
World History Gr. 10	131	131	442	87	35	62	55	gr.9&10 47	990	10.37

	7-9 Bishop	7-9 Westwood	10-12 G.H.S.	7-12 Lincoln	7-12 Mebane	7-12 Santa Fe	7-12 Hawthorne	7-12 Newberry	Total	%
Amer. History Gr. 8	474	364	—	342	124	134	84	64	1586	16.61
Amer. History Gr. 11	—	—	629	195	115	101	48	29	1117	11.70
American Government	—	—	—	—	115	—	37	24	176	1.84
Amer. & World Affairs	—	—	75	—	—	—	—	—	75	.79
World History Gr. 9	132	140	—	—	—	—	—	70	342	3.58
Civics	—	—	—	208	48	—	66	—	322	3.37
Geography Gr. 7	474	414	—	347	107	134	97	69	1642	17.20
Agriculture	89	—	—	—	gr.8 enrich. 67	120	gr.8 enrich. 66	—	342	3.58
Agriculture I Gr. 9	—	36	—	76	52	—	40	26	230	2.41
Agriculture II	—	—	28	30	23	—	20	21	122	1.28
Agriculture III & IV	—	—	11	22	40	—	48	25	146	1.53
Agriculture Science	51	30	—	—	—	—	—	—	81	.85
Agriculture Sp. Ed.	—	—	—	25	—	—	—	—	25	.26

	7-9	7-9	10-12	7-12	7-12	7-12	7-12	7-12		
	Bishop	Westwood	G.H.S.	Lincoln	Mebane	Santa Fe	Hawthorne	Newberry	Total	%
Industrial Arts	—	—	—	137 gr.7 139 gr.8	—	—	—	—	276	2.89
Ag. Shop	—	37	—	—	—	—	—	—	37	.39
Wood Shop	90	—	—	—	—	—	—	—	90	.94
Drafting Shop	82	—	—	—	—	—	—	—	82	.86
Cosmetology I	—	—	—	9	—	—	—	—	9	.09
Cosmetology II	—	—	—	15	—	—	—	—	15	.16
Tailoring I	—	—	—	18	—	—	—	—	18	.19
Tailoring II	—	—	—	16	—	—	—	—	16	.17
Masonry I	—	—	—	20	5	—	—	—	25	.26
Masonry II	—	—	—	15	7	—	—	—	22	.23
Architectural Drafting	—	—	18	—	14	—	—	—	32	.34

	7-9	7-9	10-12	7-12	7-12	7-12	7-12	7-12		
	Bishop	Westwood	G.H.S.	Lincoln	Mebane gr.8	Santa Fe	Hawthorne	Newberry	Total	%
Industrial Craft	179	—	—	—	124	—	—	—	305	3.25
Industrial Craft I	—	—	—	—	14	—	—	—	14	.15
Industrial Craft II	—	—	—	—	13	—	—	—	13	.14
Industrial Craft III	—	—	—	—	7	—	—	—	7	.07
Machine Shop	—	—	11	—	—	—	—	—	11	.12
Voc. Hort.	—	13	19	16	—	—	—	—	48	.50
Electronics	—	—	18	—	—	—	—	—	18	.19
Spec. Ed.	—	56	35	56	—	29	—	15	191	2.00